EDITOR'S NOTE

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No. 84-1259-CFX
Status: GRANTED

Title: Dow Chemical Company, Petitioner
v.
United States, etc.

Docketed:
February 7, 1985

Court: United States Court of Appeals
for the Sixth Circuit

Counsel for petitioner: Goetee, Jare M.

Counsel for respondent: Solicitor General

Entry	Date	Note	Proceedings and Orders
1	Feb 7 1985	G	Petition for writ of certiorari filed.
2	Mar 8 1985		Brief amicus curiae of Mountain States Legal Foundation filed.
4	Mar 19 1985		Order extending time to file response to petition until April 20, 1985.
5	Apr 17 1985		Order further extending time to file response to petition until May 20, 1985.
6	May 21 1985		DISTRIBUTED. June 6, 1985
7	May 21 1985	X	Brief of respondent United States, etc. in opposition filed.
8	Jun 10 1985		Petition GRANTED. The case is set for oral argument in tandem with No. 84-1513, California v. Ciraolo.
			**********
9	Jul 23 1985	G	Motion of petitioner to maintain under seal portions of the record placed under seal by the United States District Court for the Eastern District of Michigan filed.
10	Jul 25 1985		Joint appendix filed.
11	Jul 25 1985		Brief of petitioner Dow Chemical Company filed.
12	Jul 25 1985		Brief amicus curiae of Chamber of Commerce of the U.S., et al. filed.
13	Jul 25 1985		Brief amicus curiae of Michigan Manufacturers' Association, et al. filed.
14	Jul 24 1985		DISTRIBUTED. Sept. 30, 1985. (Motion of petitioner to seal the record).
16	Aug 23 1985		Order extending time to file brief of respondent on the merits until September 20, 1985.
17	Sep 6 1985		Record filed.
19	Sep 25 1985		Order extending time to file brief of respondent on the merits until October 6, 1985.
27	Oct 2 1985		Brief of respondent United States, etc. filed.
28	Oct 7 1985		Motion of petitioner to maintain under seal portions of the record placed GRANTED.
29	Oct 18 1985		CIRCULATED.
30	Oct 18 1985		Set for Argument Tuesday, December 10, 1985 (3rd Case).
31	Nov 27 1985	X	Reply brief of petitioner Dow Chemical Co. filed.
32	Dec 10 1985		ARGUED.

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No. _____

IN THE

Supreme Court of the United States

October Term, 1984

THE DOW CHEMICAL COMPANY,

Petitioner,

versus

UNITED STATES OF AMERICA
BY AND THROUGH ADMINISTRATOR,
ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

– AND APPENDIX –

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QUESTIONS PRESENTED

I.

HAS THIS COURT'S DECISION IN *OLIVER* v. *UNITED STATES*, __ U.S. __, 80 L.Ed.2d 214 (1984), WHICH HELD AN AGRICULTURAL FIELD TO BE AN "OPEN FIELD", MODIFIED EARLIER HOLDINGS OF THIS COURT TO SUCH AN EXTENT THAT A HIGHLY SECURED YET OPEN-AIR MANUFACTURING FACILITY IS AN "OPEN FIELD" WITH NO REASONABLE EXPECTATION OF PRIVACY IN THE MINUTE DETAILS OF ITS COMPLEX PLANT FROM THE INTRUSIVE, VISUALLY AIDED SURVEILLANCE FROM THE AIR?

II.

DOES SUBSECTION 114(a) OF THE CLEAN AIR ACT AUTHORIZE THE ENVIRONMENTAL PROTECTION AGENCY TO UTILIZE AERIAL RECONNAISSANCE PHOTOGRAPHY AS A SITE INSPECTION TECHNIQUE?

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THE DOW CHEMICAL COMPANY,
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ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

Petitioner respectfully prays that a Writ of Certiorari issue to review the opinion of the United States Court of Appeals for the Sixth Circuit decided and filed November 9, 1984.

OPINION BELOW

The opinion of the Court of Appeals decided and filed on November 9, 1984 (Appendix A), has been reported at 749 F.2d 307.

JURISDICTION

Jurisdiction of this Court to review the decision of the United States Court of Appeals for the Sixth Circuit is founded upon 28 U.S.C. § 1254(1).

The opinion of the Court of Appeals (Appendix A), was decided and filed on November 9, 1984. A Petition for Rehearing was not filed.

CONSTITUTIONAL AND STATUTORY PROVISIONS

U.S. Const. amend. IV provides:

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

Subsection 114(a) of the Clean Air Act, 42 U.S.C. § 7414(a), provides:

> **Authority of Administrator or authorized representative**
>
> For the purpose (i) of developing or assisting in the development of any implementation plan under section 7410 or section 7411(d) of this title, any standard of performance under section 7411 of this title, or any emission standard under section 7412 of this title, (ii) of determining whether any person is in violation of any such standard or any requirement of such a plan, or (iii) carrying out any provision of this chapter (except a provision of subchapter II of this chap-

ter with respect to a manufacturer of new motor vehicles or new motor vehicle engines) —

(1) The Administrator may require any person who owns or operates any emission source or who is subject to any requirement of this chapter (other than a manufacturer subject to the provisions of section 7525(c) or 7542 of this title) with respect to a provision of subchapter II of this chapter to (A) establish and maintain such records, (B) make such reports, (C) install, use, and maintain such monitoring equipment or methods, (D) sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (E) provide such other information as he may reasonably require; and

(2) the Administrator or his authorized representative, upon presentation of his credentials —

(A) shall have a right of entry to, upon, or through any premises of such person or in which any records required to be maintained under paragraph (1) of this section are located, and

(B) may at reasonable times have access to and copy any records, inspect any monitoring equipment or method required under paragraph (1), and sample any emissions which such person is required to sample under paragraph (1).

Subsection 114(c) of the Clean Air Act, 42 U.S.C. § 7414(c), provides:

Availability of records, reports, and information to public; disclosure of trade secrets

Any records, reports or information obtained under subsection (a) of this section shall be available to the public, except that upon a showing satisfactory to the Administrator by that person that records, reports, or information, or particular part thereof, (other than emission data) to which the Administrator has access under this section if made public, would divulge methods or processes entitled to protection as trade secrets of such person, the Administrator shall consider such record, report, or information or particular portion thereof confidential in accordance with the purposes of section 1905 of Title 18, except that such record, report, or information may be disclosed to other officers, employees, or authorized representatives of the United States concerned with carrying out this chapter or when relevant in any proceeding under this chapter.

STATEMENT OF THE CASE

The genesis of this case was EPA's surreptitious acquisition of aerial reconnaissance photographs of Dow's entire 2,000 acre fenced and secured Midland, Michigan, manufacturing facility for use as evidence in a Clean Air Act enforcement action concerning emissions from Dow's two power houses. For reasons of worker safety, economics, maintenance and industry custom, many of the process areas within the Dow Midland facility are open-air plants. After learning of the flyover from the EPA contractor, Dow brought this action under 28 U.S.C. § 1331* to preserve its privacy

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* Jurisdiction was also based on 28 U.S.C. §§ 1337, 1361, 2201, 2202 and 5 U.S.C. § 701.

interests and to protect the internal details, confidential business information and trade secrets of its open-air operations from public disclosure through the Freedom of Information Act (5 U.S.C. 552) or any other mechanism.

Dow has been manufacturing chemicals at its Midland facility since the 1890's. The 3.25 million dollar (1977 dollars) security system for the 2,000 acre manufacturing facility is described in the District Court opinion [536 F. Supp. 1355, 1364-1365] (Appendix B, pp. B-19-21). That system ranges from an eight (8) foot high perimeter fence and a twenty-four (24) hour security force of at least twenty-five (25) people, to motion detectors at strategic locations within the facility. Dow's security measures to protect against aerial photography, which include explicit direction to the Dow security department to watch for suspicious aircraft (multiple passes) and follow-up was described to the Court of Appeals (Jt. Appen., Ct. App., 291-306). The Court, however, found that Dow takes no precautions against aerial observation (Appendix A, p. A-8).

Dow welcomed the EPA into Dow's secured Midland facility for a two (2) to three (3) hour inspection on September 9, 1977. During the visit, which was part of EPA's ongoing investigation of emissions from Dow's two power houses, EPA was denied nothing it requested to see. After the visit, Dow provided schematic drawings of the power houses to EPA per its request.

On December 2, 1977, EPA contacted Dow and requested a second, repetitive on-site inspection — but this time with a camera. Dow refused the repetitive inspection and the taking of photographs. The possibility of EPA's getting a warrant was discussed.

Without further communication to Dow, on February 7, 1978, EPA caused the flyover of Dow's entire Midland facility and the taking of high resolution, vivid color aerial photographs with a precision, floor-mounted, cer-

tified mapping camera. In six (6) passes over the plant and approximately seventy-five (75) photographs, EPA captured not only Dow's two thousand (2,000) acre fenced manufacturing area, but also Dow's research and corporate office areas, the Dow Corning Company facility, and nearly all of the city of Midland. Items and equipment as small as one-half (½) inch in diameter are discernable from the original (unenlarged) contact prints using simple, hand-held magnification. Many of these minute, but observable items are located in interior regions of the plant which are surrounded by buildings and other structures which make observation from anywhere but directly above, a near physical impossibility.

EPA ordered the aerial reconnaissance photographs of the Dow facility for use as direct evidence in a Clean Air Act enforcement action against Dow relating to the power house emissions. None of the photographs depicted power house emissions.

Despite the District Court's finding that items and equipment, which were both inside the fence and neither visible from the ground nor from the air with the naked eye, were depicted in astonishing detail, the Court of Appeals did not recognize the critical distinction between mere (unaided) aerial observation and detailed aerial photography. The unaided human eye and mind cannot perceive or capture for later study the complex web of pipes, vessels and equipment of one plant, much less many plants on 2,000 acres. The aerial photographs at issue did.

Dow recognizes that planes fly over or near its plant. But, there is no support in fact or in the record for the Court of Appeals' finding that the Midland plant is on a take-off and landing pattern for an airport (Appendix A, pp. A-8, 9).

The District Court granted Dow's Motion for Partial Summary Judgment and found that EPA's actions of capturing the entire facility in vivid detail (to the point of discerning items ½ inch in size) after consent for an inspection had been refused and without judicial authorization was a violation of Dow's reasonable expectation of privacy and an unreasonable search in violation of the Fourth Amendment. The District Court also found that aerial photography is outside of EPA's inspection authority since the practice of aerial photography cannot comply with the plain language of Section 114(a)(2) of the Clean Air Act, which authorizes EPA to present credentials then enter to, upon or through a site to inspect records, check monitoring equipment, or take samples.

On November 9, 1984, the Court of Appeals reversed *in toto* the District Court's opinion. Despite the fact that EPA admitted its activity was a search, the Court of Appeals found that there was no search. The Court of Appeals held that even though Dow had a privacy interest to be free from ground level intrusion, Dow had no reasonable expectation to be free from the aerial spectator. The Court also held that "[a]lthough the [Clean Air Act] does not expressly authorize enhanced aerial observation, the language of Section 114 clearly does not foreclose this technique." (Appendix A, p. A-14).

No petition for rehearing was filed.

REASONS FOR GRANTING THE WRIT

This case should be granted certiorari because: a) this Court's existing Opinions have not been followed; b) the immediate cost to Dow and many others similarly situated to attempt to protect their privacy is extremely high and there is little chance, at any cost, of obtaining

continuing protection as intrusive technology increases; and c) nonparticularized and general searches by means of aerial photography are frequently occurring and will continue indefinitely without review, judicial oversight, or legislative authority/safeguards since the searches are carried out in a wholly surreptitious manner and hence will not be challenged.

The Court of Appeals' decision is inconsistent with accepted precedents of this Court, common sense, and public policy. The decision poses a tremendous economic problem to the chemical industry. If complex manufacturing facilities are deemed to be open fields in which the owners have no reasonable expectation of privacy with respect to visually enhanced intrusions, then companies such as Dow cannot maintain that their technology discernible through such visually enhanced means has been maintained secret. Making reasonable efforts to maintain the secrecy of a trade secret is a condition precedent to alleging that information or technology in fact constitutes a protectable trade secret. *Kewanee Oil Company* v. *Bicron Corporation*, 416 U.S. 470, 476 (1974). The decision cracks open the door to legalizing industrial espionage.

The Court of Appeals' decision will soon engender serious economic (privacy protection cost) and public policy (privacy loss) problems and cause citizens to engage in non-productive activity, such as attempting to cover all or a portion of huge outdoor production processes despite the common sense factors of worker safety, plant maintenance and unit cost dictating against such action. All to prevent government agents from doing what they ought not do in the first place.

I.

THE DECISION IS INCONSISTENT WITH THIS COURT'S OPINIONS IN *OLIVER* v. *UNITED STATES*, 80 L.Ed.2d 214 (1984); *MARSHALL* v. *BARLOW'S INC.*, 436 U.S. 307 (1978); *AIR POLLUTION VARIANCE BOARD* v. *WESTERN ALFALFA CORPORATION*, 416 U.S. 861 (1974); AND *KATZ* v. *UNITED STATES*, 389 U.S. 347 (1967)

It is axiomatic that commercial and industrial establishments have a reasonable expectation of privacy and are entitled to Fourth Amendment protection in their non-public areas. *Marshall* v. *Barlow's Inc.*, 436 U.S. 307 (1978); *Katz* v. *United States*, 389 U.S. 347 (1967); and *Oliver* v. *United States*, __ U.S. __, 80 L.Ed.2d 214 (1984). The Court of Appeals' opinion is a radical departure from those cases.

The Court of Appeals did find that Dow has an expectation of privacy at ground level:

> Here Dow had an actual expectation of privacy in certain parts of its plant, privacy which included the freedom from certain kinds of intrusion. Dow took great pains to be free from ground level intrusion by building a perimeter security fence and employing security guards. 536 F. Supp. at 1364-65. Hence, Dow had a kind of actual privacy expectation in these parts of its plant, a privacy interest to be free from ground level intrusions from the street. (Appendix A, p. A-8).

Despite its finding of a reasonable expectation of privacy at ground level, the Court of Appeals abandoned consistency and common sense and found that Dow had no reasonable expectation of privacy from the air. The Fourth Amendment is thus eviscerated as far as open-air industry is concerned. To reach this remarkable conclusion, the Court ignored the distinction between

mere aerial observation and detailed aerial photography, held that EPA's admitted search was not a search at all, held that Dow's security measures to protect against aerial photography were nonexistent, found that the Dow facility was on an airport flight pattern despite no support in fact or in the record, and held the secured, developed industrial complex to be an open field.

A. Detailed Aerial Photography Versus Mere Aerial Observation

The Court of Appeals ignored the critical distinction between mere aerial observation and detailed aerial photography. Mere aerial observation (naked-eye) is akin to a government agent watching a house from a public park, or an EPA smoke reader observing a plume from a public right-of-way. *Air Pollution Variance Board* v. *Western Alfalfa*, 416 U.S. 861 (1974). Sophisticated aerial photography, which perceives and captures detail which is inaccessible to the unaided human eye or mind, is analogous to using a telescope or telephoto lens to peer into a structure to a degree where the details of human activity are visible. *Cf. United States* v. *Kim*, 415 F. Supp. 1252 (D.Ha. 1976) [government use of telescope enabling agents to determine reading material of suspect through an apartment window is an unreasonable search], and *United States* v. *Taborda*, 635 F.2d 131 (2nd Cir. 1980) [enhanced viewing through a window into interior of a home with a high-powered telescope unlawful].

As a public policy and common sense matter, the location of the "window", that is, to the street or to the sky, should not matter. Once the human relations that create the need for privacy are established, and the reasonable expectation of privacy is recognized, the reasonableness of the search is judged by the government's actions.

The EPA aerial reconnaissance photographs taken by a floor-mounted certified mapping camera captured Dow's entire Midland facility (and most of Midland) in such vivid detail as to defy the label of mere aerial observation. Those pictures, which depict the inner workings of the open-air manufacturing plants within the fenced and secured Midland facility, are the product of extremely intrusive, aided and constitutionally offensive scrutiny. The photographs are the equivalent of technical process drawings and blueprints — the very heart of Dow's business. EPA searched the interior regions of the Dow facility — areas where the public has no right to be. EPA "saw" the minute details of interior portions of the plant not merely by means of the aerial perspective, but through the aid of sophisticated visual enhancement and capture *via* aerial photographs.

B. A Secured, Developed Industrial Facility Is Not An Open Field

It is contrary to common sense and public policy that an industrial facility can be deemed to be an open field from the sky, but not from the ground. An area is either an open field or it is not. It cannot logically be both. Having Fourth Amendment rights at ground level is a meaningless mockery if a more intrusive, non-particularized, surreptitious search method is available without restriction upon government agents.

In its Opinion, the Court of Appeals references Dow's buildings and the spaces between those buildings (Appendix A, pp. A-4, 6, 8-13). The Court overlooks the complex mass of pipes, vessels and equipment which comprise Dow's outdoor manufacturing areas, the detail of which Dow is trying to protect, and which are neither buildings nor open spaces between buildings. Those multi-million dollar outdoor plants are the basis of

Dow's business, its competitive edge, and the fruits of its inventors and engineers. They are protected by Dow's multi-million dollar security system and our legal system.

Until the Court of Appeals' decision, a secured and developed industrial facility had never been held to be an open field. The District Court specifically rejected the applicability of the open fields exception to this case. 536 F. Supp. at 1358, n. 5 (Appendix B, p. B-6). Since *Hester* v. *United States*, 265 U.S. 57 (1924), the open fields doctrine has been generally applied to rural, agricultural land. Some courts have interpreted "field" well beyond its literal meaning to include wooded areas, deserts, vacant lots in cities, and open beaches, but never a developed, secured industrial complex. *See*, I. W. LaFave, Search and Seizure § 2.4 at 332 (1978). In those cases the land is usually "developed" only in an agricultural sense. The security and expectation of privacy question usually revolves around agricultural-type fencing and posting.

In *Oliver* v. *United States*, *supra*, this Court specifically included "offices and commercial buildings" and "an office or commercial structure" within the protection of the Fourth Amendment, as opposed to "open fields." *Id.*, p. 224, and p. 224 n. 8. The Sixth Circuit opinion misapprehends and misapplies the open fields doctrine of *Hester* as reaffirmed in *Oliver*, in derogation of Petitioner's Fourth Amendment rights.

C. The Open Fields Doctrine Has Limited, If Any, Application To Cases Where Sophisticated, Intrusive Surveillance Devices Are Employed To Seek Evidence Without Consent Or Judicial Authority

The open fields doctrine must be limited both to the nature of the site inspected and to the unaided or un-

enhanced viewing application of *Hester* and *Oliver*. As Justice Brandeis cautioned in his dissent in *Olmstead* v. *United States*, 277 U.S. 438 (1928), and as the Court accepted in *Katz*, the Fourth Amendment must be capable of wider application than the mischief which gave it birth. Once it is decided that society recognizes a reasonable expectation of privacy in a commercial establishment, *Marshall* v. *Barlow's Inc., supra*, then that protection ought not depend on the intrusive means selected by the government.

Enforcement officials can observe (unaided) the perimeter or exterior or plainly visible aspects of a home, factory or apartment as much as they want. *Air Pollution Variance Board* v. *Western Alfalfa Corp., supra; Marshall* v. *Barlow's Inc., supra*. In fact, the EPA deployed a smoke reader to the Dow facility after the September 1977 inspection and before the February 1978 flyover (Jt. Appen., Ct. App., 91). However, when the government uses observation or detection aids to intrude in minute detail into the interior areas of a protected place, that action has been held to be unconstitutional. *United States* v. *Taborda, supra*, 635 F.2d at 137; *United States* v. *Kim, supra*. The use of sophisticated photographic equipment in this case is comparable to the wire-tap in *Katz*.

The expectation of privacy only has to be reasonable, not total. The law protects the reasonable expectation of privacy, not the perfect security system. The perfect security system has no need for protection. If achievement rather than expectation of privacy were the only thing protected by the Fourth Amendment, then that Amendment would be a nullity.

Dow has thirty-seven (37) manufacturing locations in nineteen (19) states. Those locations encompass about two hundred and ten (210) separate manufacturing units, most of which are open air plants. The one representa-

tive plant discussed in this case covers thirty (30) acres, and although deemed not practical by the plant manager/engineer, would have cost at least $15,000,000 to roof in 1978. *See* Appendix F, excerpt of J. Wait's 5/10/78 Deposition, pp. 13-14 (F-1-F-2), for a brief summary of attendant practical problems. The current cost of protecting all, or a part of, two hundred and ten (210) plants would be astronomical and unreasonable in view of Dow's existing multi-million dollar security system.

As the Court in *Katz* v. *United States, supra,* 389 U.S. at 351, recognized: "What a person *knowingly* exposed to the public, even in his own home or office, is not a subject of Fourth Amendment protection. [Cite omitted.] But what he *seeks* to preserve as private, even in an area accessible to the public, may be constitutionally protected" (emphasis added).

II.

SECTION 114(a) OF THE CLEAN AIR ACT DOES NOT AUTHORIZE, EITHER EXPLICITLY OR BY LACK OF PROHIBITION, THE USE OF AERIAL PHOTOGRAPHY AS AN INVESTIGATION TOOL

The Court of Appeals agrees that Section 114 of the Clean Air Act does not expressly authorize enhanced aerial observation (Appendix A, p. A-14). However, some misplaced analogies are used to hold that the language of Section 114 does not foreclose the technique. First cited are data gathering methods which are distinguishable since they do not entail observing on-site details of an industrial facility.

Next is a comparison with "other law enforcement officers." Even if the EPA is deemed to be a law enforcement agency rather than an administrative agency, law enforcement agencies are bound by the Constitution and

statutes which authorize and limit their activities. For example, the Omnibus Crime Control And Safe Streets Act defines the "why" and the "when" of warrants for wiretaps. 18 U.S.C. § 2510 *et seq.* Other administrative agencies, such as OSHA, have regulations that somewhat define and limit the agency's statutory inspection authority. 29 C.F.R. § 1903 *et seq.* EPA has no comparable regulations guiding the discretion of its inspectors.

The Court of Appeals' analogy to military investigators is especially inappropriate. Not only does the military operate under a different system of justice, but it is expressly prohibited from aiding in civilian law enforcement. 18 U.S.C. § 1385. Also, unlike the EPA, the military generally keeps its files from public scrutiny.

In balancing citizens' right to privacy and the EPA's investigation and enforcement needs, detailed aerial photography is clearly a loser. There is absolutely no particularity attendant to aerial photography. The camera is switched on and the "run" is made, capturing everything around the point of interest. Many people's privacy in addition to Dow's was invaded in this case. More economic, lawful and reliable alternatives exist. Smoke-readers are used by the EPA. Under Section 114 (a)(1) the Agency has the authority to request a wealth of information from a site owner or operator. Although costly to the Agency to obtain, the aerial photographs in this case showed no plume. The method is a hit-or-miss, unreliable evidentiary tool.

A. The Decision Is Inconsistent With Congressional Intent As Shown By The Plain Meaning Of The Statutory Language

By statute, the EPA must *present credentials,* then *enter to, upon or through* the property for the purpose of *checking records, monitoring equipment or sampling emissions.*

Section 114(a)(2) [42 U.S.C. § 7414(a)(2)]. None of the statutory prerequisites or purposes delineated by Congress are met by aerial photography.

The Court of Appeals' decision that the language of Section 114 does not foreclose the use of aerial photography as an on-site inspection technique is contrary to the plain meaning of the statutory language. *Consumer Product Safety Comm.* v. *GTE Sylvania, Inc.*, 447 U.S. 102, 108 (1980).

Congress has directly spoken on the precise question at issue; that is, the manner and purposes of a site inspection under the Clean Air Act. Section 114(a)(2). Congress' unambiguously expressed intent must be given effect. *Chevron, U.S.A., Inc.* v. *Natural Resources Defense Council, Inc.*, 467 U.S. __, 81 L.Ed.2d 694, 703 (1984). "If broader powers be desirable, they must be conferred by Congress. They cannot be merely assumed by administrative officers; nor can they be created by the courts in the proper exercise of their judicial functions." *Federal Trade Commission* v. *Raladam Company*, 283 U.S. 643, 649 (1931).

B. The Decision Is Inconsistent With The Clean Air Act's Provision Protecting Trade Secrets And Existing Tort And Criminal Law

The Court of Appeals' decision annihilates the protection for trade secrets offered by the Clean Air Act. Section 114(c) (42 U.S.C. § 7414(c)) and 40 C.F.R. § 2.201 *et seq.* The Agency's use of aerial photography abrogates any trade secret protection since the person photographed has no notice of the Agency's acquisition of the photographs and no opportunity to claim that the photographs contain confidential business information.

The decision is also counter to the criminal law on theft of trade secrets and the law of torts on misappro-

priation of trade secrets. The Restatement of Torts § 757 (1939) (Appendix C), is the basis of trade secret definition and protection. "The law also protects the holder of a trade secret against disclosure or use when the knowledge is gained, not by the owner's volition, but by some 'improper means,' Restatement of Torts § 757(a), which may include theft, wiretapping, or even aerial reconnaissance." *Kewanee Oil Company* v. *Bicron Corporation, supra,* 416 U.S. at 475-476 (footnote omitted). *DuPont* v. *Christopher,* 431 F.2d 1012 (5th Cir. 1970), *cert. den.* 400 U.S. 1024 (1971), cites the Restatement of Torts § 757 and discusses the tortious taking of trade secrets from a plant under construction by aerial photographs. *See also* the Uniform Trade Secrets Act (Appendix D), which was approved by the National Conference of Commissioners on Uniform State Laws in 1979, and has been adopted by at least seven (7) states. In part, a trade secret under the Uniform Act (§ 1(4)) must not be readily ascertainable by proper means, and subject to efforts that are reasonable under the circumstances to maintain its secrecy. Although Michigan has not yet adopted the Uniform Trade Secrets Act, Michigan Compiled Laws (M.C.L.) § 752.772 (Appendix E), makes it a crime to steal a trade secret. Photographs are explicitly recognized in M.C.L. § 752.771 (Appendix E), as one means of stealing trade secrets. It is also illegal to invade one's privacy by means of surveillance in Michigan. M.C.L. § 750.539a and d (Appendix E).

CONCLUSION

The wide-spread ramifications of holding that a multi-million dollar developed and secured industrial facility is an open field, and hence outside of the protection of the Fourth Amendment, is especially grim. Industrial privacy

and trade secret protection from sophisticated surveillance into open-air operations are lost. The potential for abuse by the government is manifest. Searches will be indiscriminate with no judicial authorization, no restraint on frequency, and no restraint on the nature or scope of the surveillance.

The Court of Appeals, in reversing the District Court, condoned the violation of Petitioner's right to be protected against unreasonable search and seizure as guaranteed by the Fourth Amendment, and granted the Respondent *carte blanche* to conduct general searches contrary to existing constitutional restraints and legislative direction.

In view of this Court's decisions in *Katz* v. *United States*, *Marshall* v. *Barlow's Inc.*, *Air Pollution Variance Board* v. *Western Alfalfa*, and *Oliver* v. *United States*, the Open Fields Doctrine was misapplied and Petitioner's reasonable, constitutionally justified, expectation of privacy was violated.

For reasons stated above, this Petition for Writ of Certiorari should be granted.

Respectfully submitted,

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Dated: February 7, 1985

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APPENDIX A

OPINION

(United States Court of Appeals
for the Sixth Circuit)

(Decided and Filed November 9, 1984)

(DOW CHEMICAL COMPANY, Plaintiff-Appellee, v. UNITED STATES OF AMERICA, by and Through ANNE M. BURFORD, ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY, Defendant-Appellant — No. 82-1811; ON APPEAL from the United States District Court for the Eastern District of Michigan.)

Before: LIVELY, Chief Judge; MERRITT, Circuit Judge; HORTON, District Judge.*

MERRITT, Circuit Judge.

In investigating Dow Chemical Company for possible violations of the Clean Air Act, the Environmental Protection Agency caused aerial photographs of Dow's 2000-acre Midland, Michigan plant to be made by a private aerial survey company. Upon learning of the EPA flyover, Dow sought declaratory and injunctive relief in the United States District Court for the Eastern District of Michigan. On cross-motions for partial summary judgment, the District Court held that EPA's detailed aerial photography was an unreasonable search and seizure under the Fourth Amendment. The District Court permanently enjoined EPA from conducting future aerial

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* The Honorable Odell Horton, Judge of the United States District Court for the Western District of Tennessee, sitting by designation.

surveillance and photography of Dow's Midland, Michigan plant. We hold that the photographic flyover did not consititute a Fourth Amendment search and was not outside the EPA's statutory authority.

I.

The EPA began an investigation of Dow's Midland, Michigan plant during the latter part of 1977. The investigation focused on whether emissions from two coal-burning power houses violated the federal air quality standards established under the Clean Air Act.

On September 9, 1977, EPA made an on-site inspection of Dow's power plants. EPA later requested and received from Dow schematic drawings depicting both the physical layout of the power houses and the boilers and turbines within the power houses. EPA then called Dow to arrange a second inspection. Dow refused to grant entry for this inspection upon hearing that EPA inspectors planned to take photographs of the plant. After being denied entry, EPA informed Dow that it would consider seeking a search warrant to gain access to the plant.

EPA did not secure a warrant; instead, on February 6, 1978, EPA contracted with Abrams Aerial Survey Corporation, a private company located in Lansing, Michigan, to take aerial photographs of the Dow plant. EPA's stated purposes for the aerial surveillance were to create visual documentation of smokestack emissions and to obtain perspectives on the layout of the plant and its relationship to the surrounding geographic area. EPA directed Abrams to take the pictures at particular altitudes and angles; EPA informed Abrams that emissions would be more visible in early morning or late afternoon, but left the actual time of the flight to Abrams' discretion.

Abrams performed the overflight in the afternoon on February 7, 1978. The aircraft made at least six passes over the plant at altitudes of 12,000, 3,000, and 1,200 feet. Abrams used a Wild RC-10 aerial mapping camera to take approximately 75 color photographs of various parts of the Dow plant. Because of Abrams' sophisticated photographic equipment, the photographs contain vivid detail and resolution; some of the photographs can be enlarged to a scale of 1 inch equals 20 feet or greater, without significant loss of detail or resolution. The District Court found that when enlarged in this manner and viewed under magnification, the photographs show equipment, pipes and power lines as small as ½ inch in diameter.

EPA did not notify Dow either before or after the flight. When Dow learned of the event a few weeks later, from sources other than EPA, Dow filed this action.

The District Court reasoned that once it is established that an administrative search occured, "[t]he question [turned] on whether EPA's authority under the Clean Air Act meets 'the sufficiently comprehensive and defined' criteria of *Donovan* v. *Dewey* . . . or whether the search violated a reasonable expectation of privacy." 536 F. Supp. at 1360. The District Court concluded that *Marshall* v. *Barlow's Inc.*, 436 U.S. 307, 313 (1978), controlled the present case, and that an administrative search requires a warrant, unless the search falls into one of several narrow and well-defined exceptions to the warrant requirement. In the District Court's view, EPA's search of Dow's chemical plant did not fit any of these exceptions. Hence, the Court found that EPA's aerial photography of Dow's Midland plant was an unreasonable search proscribed by the Fourth Amendment.

Although the Court "[was] fairly certain that the Fourth Amendment issue raised in this case is properly resolved on the basis of an administrative inspection analysis alone," 536 F. Supp. at 1363, nevertheless, it considered it useful to "alternately review the facts (in *Dow*) under the framework of *Katz*." *Id.* According to the District Court, the search of Dow's Midland plant was unreasonable because EPA's aerial photography invaded Dow's reasonable expectation of privacy in the "interior regions of its plant" — meaning by this phrase, the open, outdoor spaces between plant buildings. The Court concluded that the photographic equipment used by EPA's agents constituted "enhanced viewing" that invaded Dow's reasonable expectation of privacy in these outdoor regions. Additionally, the search was unreasonable because EPA's needs in preventing pollution, though legitimate, were outweighed by Dow's reasonable expectation of privacy.

Lastly, the District Court held that the Clean Air Act did not authorize EPA to institute aerial surveillance of chemical plants. Hence, by conducting such surveillance, EPA exceeded its statutory authority under the Act.

Therefore, two questions are presented by this appeal. First, we must decide the constitutional issue of whether there was an unreasonable search under the Fourth Amendment. Second, did EPA exceed its statutory authority under the Clean Air act by conducting the aerial photography?

II.

The Fourth Amendment provides for "people to be secure in their persons, houses, papers and effects against unreasonable searches . . . and [that] no warrant shall issue but upon probable cause . . . ." U.S. Const.

amend. IV. The U.S. Supreme Court held nearly twenty years ago that these protections apply, at least in part, when a governmental agency conducts an administrative search of a commercial facility. *Camara* v. *Municipal Court*, 387 U.S. 523 (1967); *See* v. *City of Seattle*, 387 U.S. 541 (1967). More recently, in *Marshall* v. *Barlow's Inc.*, 436 U.S. 307 (1978), the Court clarified the law concerning administrative searches and held that when government action constitutes a Fourth Amendment "search," the agency must get an administrative warrant, or, subject to certain exceptions, the search will be deemed unreasonable.[1] If the government action in this case — EPA's aerial photography of Dow Chemical's Midland, Michigan plant — constitutes a Fourth Amendment "search," then *Barlow's* controls, and EPA's warrantless search violated Dow's Fourth Amendment rights. If, on the other hand, the aerial photography was not a search, then EPA's aerial observation did not violate the Fourth Amendment. The question before this court then is whether EPA's aerial photography was sufficiently intrusive to constitute a "search" triggering the warrant clause of the Fourth Amendment.

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[1] Exceptions to the *Barlow's* administrative warrant requirement have been made in industries like the alcoholic beverage industry, which has long been "subject to close supervision and inspection." *Colonnade Corp.* v. *United States*, 397 U.S. 72, 77 (1970), and the firearms industry, which has also been subject to pervasive and comprehensive government regulation. *United States* v. *Biswell*,406 U.S. 311 (1972). Implicit in these exceptions to the warrant requirement is the notion of implied consent. Another exception has been carved out when a statute, by explicitly requiring a warrantless search, "establishe[d] a predictable and guided federal regulatory presence." *Donovan* v *Dewey*, 452 U.S. 594, 604 (1981) (Supreme Court upholds constitutionality of section 103(a) of the Mine Safety and Health Act requiring that mine safety inspectors make warrantless searches). Inherent in this exception is a test that balances the strength of the federal regulatory interest, on the one hand, with the reasonable expectation of privacy of the commercial entity on the other. The government has not argued for the application of any of these exceptions to this case.

The issue of whether there was a search is a threshold requirement of Fourth Amendment analysis. To be entitled to Fourth Amendment protection, it is first necessary to determine whether there was a "search," a term of art with special constitutional significance. Traditionally, in defining what constituted a search, the Supreme Court interpreted the Fourth Amendment as primarily protective of property rights; a trespass was a necessary condition for determining whether a search had occurred. *See Olmstead* v. *United States,* 277 U.S. 438 (1928) The Supreme Court modified this property based concept in *Katz* v. *United States,* 389 U.S. 347 (1967). *Katz* defines what constitutes a search with a two-prong test: first, the person claiming Fourth Amendment protection must prove that he or she had an actual, or a subjective, expectation of privacy in the area intruded upon by the government. Second, that subjective expectation must be one that society would deem reasonable. The *Katz* doctrine therefore protects an individual's actual privacy interest when that interest is reasonable. In the instant case, we must determine whether the government's aerial photography of Dow's Midland plant intruded upon Dow's actual and reasonable expectation of privacy in the spaces between its buildings, or in the words of the District Court, "in the interior regions of its plant."

Before applying the *Katz* analysis to this case, it is important to note that the word "reasonable" is used in Fourth Amendment analysis in two different ways, and that these two ways must be separated in order to avoid confusion. A "reasonable search" is different from a "reasonable expectation of privacy." The former refers to whether "probable cause" existed or whether the officers exceeded the limits of the warrant. The latter determines whether there was a Fourth Amendment "search" at all and focuses on whether the human relationships that

normally exist at the place inspected are based on intimacy, confidentiality, trust or solitude and hence give rise to a "reasonable" expectation of privacy. The District Court may have confused or conflated these two when it stated that it "[was] fairly certain that the Fourth Amendment issue raised in this case is properly resolved on the basis of an administrative inspection analysis alone" without reference to an analysis under *Katz*. 536 F. Supp. at 1363. But in order for an administrative inspection to trigger the Fourth Amendment, there must be a search in the constitutional sense of that term. Hence, *Katz* must be discussed for *Katz* defines in terms of privacy interests what a search is for Fourth Amendment purposes.

III.

Establishing an actual expectation of privacy requires two elements. First, it must be established what a person had an expectation of privacy *in*, for example, a home, office, phone booth or airplane. Second, it must be established what the person wanted to protect his privacy *from*, for example, non-family members, non-employees of a firm, strangers passing by on the street or flying overhead in airplanes. The New York Stock Exchange, a place which illustrates the two types of expectations, permits only members and employees on the floor but welcomes the public observer from above.

A useful test of whether a person has a privacy interest in a certain place is whether there are any "objective manifestations of any claimed privacy expectations." *Dow Chemical Co.* v. *United States*, 536 F. Supp. 1355, 1364 (E.D. Mich. 1982). *See also United States* v. *Taborda*, 635 F.2d 131, 137 (2nd Cir. 1980) (looking into a dwelling window with telescopic lenses invades Fourth Amendment privacy interest). The objective manifestations

of a privacy expectation must be *in* some place and an expectation to be free *from* a certain kind of intrusion.

Here Dow had an actual expectation of privacy in certain parts of its plant, privacy which included the freedom from certain kinds of intrusion. Dow took great pains to be free from ground level intrusion by building a perimeter security fence and employing security guards. 536 F. Supp. at 1364-65. Hence, Dow had a kind of actual privacy expectation in these parts of its plant, a privacy interest to be free from ground level intrusions from the street. But Dow did not take any precautions against aerial intrusions, even though the plant was near an airport and within the pattern of planes landing and taking off. If elaborate and expensive measures for ground security show that Dow has an actual expectation of privacy in ground security, as Dow argues, then taking no measure for aerial security should say something about its actual privacy expectation in being free from aerial observation. Certainly, no one could reasonably expect Dow to build a dome over its entire Midland plant in order to establish its expectation of privacy, free from aerial intruders. But it does not follow that Dow could not take any measures at all to shield outdoor spaces from aerial observers. Dow could have shielded the critical spaces in between its buildings, if it had an actual expectation of privacy from aerial observation of these regions. A comparison of the precautions a person does take with the precautions he might take, when such precautions are feasible and not unreasonably expensive, is a factor to be considered in determining his privacy expectation *from the kind of intruder* about whom he is complaining. Dow has described no trade secret or confidential relationship outside its building walls that the observer from above would compromise, and Dow's objective behavior does not indicate an expectation to be free from the aerial spectator.

IV.

We are not convinced that Dow had an actual expectation of privacy from the air, but even if Dow did have such an expectation the expectation was unreasonable. On this question, the District Court erred in dismissing defendant's "open field" argument. Dow's Midland plant is 2000 acres, located in an urban area near an airport and within the pattern of planes landing and taking off. Both the size and location of an entity must be taken into account in order to determine whether it is objectively reasonable to expect privacy in all or part of that entity. Dow's size and location militate against regarding an expectation of privacy free from aerial observation as reasonable. When the entity observed is a multi-building complex, and the area observed is the outside of these buildings and the spaces in between the buildings, and when the complex is near an airport and within the pattern of planes landing and taking off, it is difficult to see how a reasonable person would have privacy expectations in the outside of the buildings and the spaces between the buildings.

Although the analogy is not perfect, Dow's Midland plant is much more like "open fields" than it is a home or office. When the area observed is like an open field, an inspection which would otherwise be a search becomes a non-search for Fourth Amendment purposes. *Hester* v. *United States*, 265 U.S. 57 (1924); *Air Pollution Variance Board* v. *Western Alfalfa Corp.*, 416 U.S. 861 (1974). The Supreme Court recently reaffirmed the "open fields" doctrine and interpreted it in light of *Katz*. *Oliver* v. *United States*, 104 S.Ct. 1735 (1984). The Court held that individuals cannot demand privacy rights for activities conducted in what are essentially open fields. The context or conditions for privacy are not present there, and such demands are not reasonable. *Id.* In

affirming this Court in *Oliver*, the Supreme Court made reference to and quoted with apparent approval from a passage in our opinion, the full text of which reads as follows:

> The Fourth Amendment and other laws protecting privacy create the conditions and the context for many relationships based on intimacy, friendship and trust. These laws establish an environment in which individual emotional and mental processes can develop freely without surveillance or interference. The legal principles that protect privacy, therefore, do not protect the desert island, the mountain top or the open field — even one that the owner posted with a "no trespass" sign. The human relations that create the need for privacy do not ordinarily take place in these settings. The only significant interest at stake here — a property owner's interest in excluding others from his possessions — is not sufficient alone to bring into play legal principles protecting privacy.

United States v. *Oliver*, 686 F.2d 356, 360 (6th Cir. 1982) (en banc). Our reasoning there leads to the conclusion here that the interior spaces outside Dow's buildings are not places in which one may have a reasonable privacy expectation.

It is true that certain outside areas associated with a home or dwelling have traditionally received Fourth Amendment protection as falling within the "curtilage." Thus, the Fourth Amendment has been held to apply to the search of a smokehouse located within a fenced yard, *see Robertson* v. *United States*, 165 F.2d 752 (6th Cir. 1948), and to a honeysuckle patch situated within a fence 150 feet from a home. *See United States* v. *Van Dyke*, 643 F.2d 992 (4th Cir. 1981).

It can be argued here that the areas in between Dow's buildings formed a sort of industrial curtilage, and therefore should receive Fourth Amendment protection. However, to apply the curtilage doctrine to this 2000-acre manufacturing complex would be a distortion of the principles on which the doctrine rests. The doctrine of curtilage is grounded in the peculiarly strong concepts of intimacy, personal autonomy and privacy associated with the home. The home is fundamentally a sanctuary, where personal concepts of self and family are forged, where relationships are nurtured and where people normally feel free to express themselves in intimate ways. The potent individual privacy interests that inhere in living within a home expand into the areas that enclose the home as well. The backyard and area immediately surrounding the home are really extensions of the dwelling itself. This is not true simply in a mechanical sense because the areas are geographically proximate. It is true because people have both actual and reasonable expectations that many of the private experiences of home life often occur outside the house. Personal interactions, daily routines and intimate relationships revolve around the entire home place. There are compelling reasons, then, for applying Fourth Amendment protection to the entire dwelling area.

Dow has legitimate privacy interests in many aspects of its corporate life. Dow has strong expectations of privacy within its offices and inside its enclosed facilities. These interests are not so powerful that they automatically apply to the exterior of Dow's plant. In the home setting, Fourth Amendment protection applies to adjoining areas because of the unique privacy interests associated with dwelling places, and because of our traditional understanding that home life is not confined

to the physical structure of the house. The areas between industrial buildings do not normally share the same uses.

Although Dow has a reasonable expectation of privacy in the interior of its plant buildings and offices, this is not to say that such a privacy interest has equal force to that which inheres in a dwelling. Indeed, the Court's ruling in *Marshall* v. *Barlow's Inc., supra,* that a lesser showing of probable cause is required to secure an administrative warrant, is evidence of this difference. The Court has noted that a commercial owner's privacy interest "differs significantly from the sancitity accorded an individual's home." *Donovan* v. *Dewey,* 452 U.S. 594, 598-99 (1981). Dow's reasonable privacy interest in the interior of its buildings does not extend into the areas between the buildings because, unlike the home setting, there is no compelling reason in terms of privacy to justify this extension. After a diligent search we have found no cases applying the curtilage concept to the commercial setting. Although there may be some places for research and development or employee interaction which justify an extension of the concept, we hold that the common law curtilage doctrine does not apply to this particular manufacturing setting.

V.

Finally, much is made of the government's use of sophisticated photographic equipment from the air. The District Court found that such sophisticated technology violated Dow's Fourth Amendment rights because the extreme detail of the photographs enabled a viewer to observe "more than the human eye could ever see." 536 F. Supp. at 1367.

The government conducts a search when it uses "enhanced viewing of the interior of a home," because it impairs "a legitimate expectation of privacy and encounters the Fourth Amendment's warrant requirement." *United States* v. *Taborda*, 635 F.2d 131, 139 (2nd Cir. 1980). Had the EPA's aerial photography of Dow's plant intruded *inside* the plant offices, file rooms and eating areas, it would be proscribed by *Taborda*.[2] As we have already discussed, it is unpersuasive, however, to compare the spaces in between Dow's buildings as anything like the interior of a home or its curtilage. The outdoor spaces of a chemical plant are simply a necessary feature of a plant, a complex of buildings, having several disparate buildings. Dow has not described what privacy interests contained in these spaces make enhanced viewing violative of the Fourth Amendment.

VI.

The District Court also erred in upholding Dow's contention that EPA's use of enhanced aerial observation as an inspection technique exceeded the agency's authority under the Clean Air Act. The District Court held that section 114 of the Clean Air Act, 42 U.S.C. § 7414, does not authorize aerial photography as an investigatory tool "even by reasonable implication." 536 F. Supp. at 1374. This finding was based on the court's statutory interpretation of section 114(a)(2)(A), which

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[2] Our reasoning in this regard is similar to that of the Ninth Circuit in *United States* v. *Allen*, 633 F.2d 1282 (9th Cir. 1980). In *Allen*, aerial photographs were taken of the exterior of ranch buildings and grounds. When enlarged, these photographs showed details of drug smuggling operations. The Ninth Circuit held that the warrantless helicopter surveillance of the coastal ranch was not a search under the Fourth Amendment. The Court observed that the case did not present "privacy expectations associated with the interiors of residences or other structures." 633 F.2d at 1289.

provides that "upon presentation of credentials," the EPA has a "right of entry to, upon, or through any premises." 42 U.S.C. § 7414(a)(2)(A). In holding that enhanced aerial surveillance was not impliedly authorized by section 114, the court found that the language of the statute pointed to the conclusion that Congress meant only to authorize "land-based examination of emission sources." 536 F.Supp. at 1374.

Although the statute does not expressly authorize enhanced aerial observation, the language of section 114 clearly does not foreclose this technique. Congress has delegated general investigative authority to EPA under the Clear Air Act. EPA investigators may go to the library to research a company, talk to its employees and former employees and observe the plant from different vantage points without making an "entry" on the premises which requires notification. Other law enforcement officers who use aerial observation in their work, *e.g.*, drug enforcement and traffic officers, coast guard and property tax mapping officials, do not have to announce their presence in advance or present credentials. Like these officers, EPA investigators should be permitted to use aerial photography as a part of their general investigative authority. Congress need not expressly delegate this authority to EPA just as it need not expressly delegate it to the FBI or the DEA or to military investigators. So long as these investigators operate in the public air space and do not intrude into areas protected by the Fourth Amendment, they may use an airplane and a camera without presentation of credentials to the owners of property over which they fly.

Accordingly, the judgment of the District Court is reversed. Costs are asseessed against appellee.

APPENDIX B

MEMORANDUM OPINION AND ORDER

(United States District Court —
Eastern District of Michigan,
Northern Division)

(Dated April 19, 1982)

(The DOW CHEMICAL COMPANY, Plaintiff, v. UNITED STATES OF AMERICA, By and Through Anne M. GORSUCH, Administrator, Environmental Protection Agency, Defendants — Civ. No. 78-10044)

* * *

JAMES HARVEY, District Judge.

I.
INTRODUCTION

This case involves a constitutional and statutory challenge to the use of warrantless aerial photography of a chemical manufacturing plant by the Environmental Protection Agency (EPA). The Dow Chemical Company (Dow) asserts that this activity by the EPA constitutes an unreasonable search in violation of the Fourth Amendment, a taking and misappropriation of trade secrets in violation of the Fifth Amendment, and the use of an inspection tool which is outside the scope of EPA's statutory authority under Sections 113 and 114 of the Clean Air Act, 42 U.S.C. §§ 7413-7414 (1980). Dow seeks a declaratory judgment and injunctive relief.

II.
FACTS

The Dow Chemical Company owns and operates a 2000 acre manufacturing plant in Midland, Michigan. In the latter part of 1977 EPA, the governmental agency primarily charged with administering and enforcing the federal pollution laws, was conducting an investigation of Dow to check emissions from the power houses located inside Dow's facility for possible violations of federal air quality standards.

In September of 1977, EPA made an on-site inspection of the power houses at Dow's plant. After the inspection EPA requested, and later received, schematic drawings of the power houses from Dow.

In December of 1977 EPA again contacted Dow and requested a subsequent entry for purposes of inspecting the power houses. Prior to making this request EPA had already begun preparations for a planned enforcement action against Dow.[1] EPA informed Dow that as part of the inspection it would be taking photographs of the Dow layout and facility. Dow objected to EPA's intention to take photographs and therefore denied EPA's request for entry. In response, EPA suggested to Dow that it would consider seeking a search warrant to gain entrance to the plant.

Rather than institute a civil action or seek a search warrant, EPA decided to obtain aerial photographs of Dow's facility. On February 6, 1978, EPA contracted with Abrams Aerial Survey Corporation (Abrams), a private company located in Lansing, Michigan, to take

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[1] A clean air act enforcement action was eventually filed and is presently pending before the Honorable Stewart A. Newblatt of this District. *United States* v. *Dow Chemical Company*, No. 80-10011 (ED Mich., filed January 25, 1980).

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aerial photographs of the Dow plant. EPA specifically informed Abrams as to the altitude, location, and direction from which the photographs were to be taken.

In the afternoon of February 7, 1978 Abrams flew over Dow's plant as directed. The aircraft made at least 6 passes over the plant at altitudes of 12,000, 3,000, and 1,200 feet. Abrams used a sophisticated Wild RC-10 aerial mapping camera to take approximately 75 color photographs of various parts of the Dow plant.[2]

The Court has carefully examined all of the photographs and has been struck by their vivid detail and resolution. As amply demonstrated by Dow at a hearing before the Court, some of the photographs taken from directly above the plant at 1,200 feet are capable of enlargement to a scale of 1 inch equals 20 feet *or greater*, without significant loss of detail or resolution. When enlarged in this manner, and viewed under magnification, it is possible to discern equipment, pipes, and power lines as small as ½ inch in diameter. Many of these minute, but observable items are located in *interior* regions of the plant which are surrounded by buildings and other structures which make observation from anywhere but *directly above*, a near physical impossibility.[3]

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[2] It is important to an understanding of this case to provide a description of the highly effective equipment used by Abrams. The aircraft used was a twin engine Beechcraft, which Abrams describes as able to "provide photographic stability, fast mobility and flight endurance required for precision photography." *Handbook on Aerial Surveys & Photogrammetry — Abrams Aerial Survey Corporation.* The camera used by Abrams cost in excess of $22,000.00 and is described by the company as the "finest precision aerial camera available." *Id.* The camera was mounted to the floor inside the aircraft and was capable of taking several photographs in precise and rapid succession. *Id.*

[3] Throughout its brief, EPA has used the term *exterior* to describe the areas depicted in the photographs. Dow has implied that these

(continued on following page)

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Dow was not aware of the EPA flyover either before or during its occurrence. When it subsequently became aware of this event a few weeks later, from sources other than EPA, Dow immediately instituted this action.

III.
JURISDICTION AND ISSUES PRESENTED

The Court has jurisdiction over the subject matter herein pursuant to 28 U.S.C. § 1331, 5 U.S.C. § 702, and 28 U.S.C. §§ 2201-2202.

This action presents 3 central issues for the Court's consideration:

I. Whether the EPA flyover and aerial photography of Dow's facilities constitutes an unreasonable search in violation of the Fourth Amendment;

II. Whether aerial photography of Dow's plant by EPA constitutes a taking of property (trade secrets) without due process in violation of the Fifth Amendment; and

III. Whether EPA exceeded its statutory authority under Sections 113 and 114 of the Clean Air Act in using warrantless aerial photography as an investigatory tool.

This matter is presently before the Court on cross motions for summary judgment. Dow seeks summary judgment on the Fourth Amendment and statutory issues, and EPA seeks entry of summary judgment on all issues.

(*continued from preceding page*)

same photographs depict *interior* areas of the plant. While none of the photographs are actually x-rays of the *inside* of buildings or structures, based on its examination, and for the reasons stated above, the Court finds that the photographs more closely approximate a view of the *interior* of the plant than the *exterior*.

This case is appropriate for summary judgment on the Fourth Amendment and Clean Air Act questions, since the material facts relative to these claims are not in dispute, and a decision thereon can be rendered as a matter of law. F.R.Civ.P. 56(c). *See Felix* v. *Young*, 536 F.2d 1126, 1130 (CA 6, 1976). As to the Fifth Amendment claim, however, and for reasons more fully described later in this opinion, *infra*, genuine issues of material fact exist which render disposition of that question by summary judgment inappropriate. *See Willetts* v. *Ford Motor Co.*, 583 F.2d 852, 855 (CA 6, 1978).

For the reasons stated below, the Court concludes that the EPA flyover and aerial photography violated Dow's rights under both the Fourth Amendment and the Clean Air Act. Partial summary judgment on these issues will therefore be entered in favor of Dow and against EPA.

IV.
DISCUSSION

FOURTH AMENDMENT

[1] The first clause of the Fourth Amendment to the United States Constitution provides that, "the right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated . . ." As the very language of this amendment makes clear, the Constitution does not proscribe all governmental searches and seizures, only those that are *unreasonable*.

Dow puts forth at least 3 analytical arguments in support of its position that the overhead flight and aerial photography by EPA constituted an unreasonable search: first, under *Coolidge* v. *New Hampshire*, 403 U.S. 443, 91 S.Ct. 2022, 29 L.Ed.2d 564 (1971), that a warrantless search is *per se* unreasonable; second, under *Marshall*

v. *Barlow's Inc.*, 436 U.S. 307, 98 S.Ct. 1816, 56 L.Ed.2d 305 (1978) that this was an unreasonable warrantless inspection; and third, under *Katz* v. *United States*, 389 U.S. 347, 88 S.Ct. 507, 19 L.Ed.2d 576 (1967), that EPA violated Dow's reasonable expectation of privacy. The Court will separately address each of these contentions.

Before turning to Dow's first assertion, the Court wishes to point out that the EPA has admitted, both in its briefs and at oral argument, that the flyover constituted both a "quest for evidence"[4] and a "search" of Dow's plant. (EPA Brief at 9; Transcript of oral argument at 44).[5] EPA has also admitted that the search was conducted without first securing a warrant. *Id.* With these two premises established, the Court need only determine whether the search was *unreasonable* within the meaning of the Fourth Amendment.

A. *Per Se Unreasonable*

[2] Subject only to "a few specifically established and well-delineated exceptions," warrantless searches have been recognized as *per se* unreasonable and therefore violative of the Fourth Amendment. *Katz* v. *United States*, 389 U.S. 347, 357, 88 S.Ct. 507, 514, 19 L.Ed.2d 576 (1967); *Schneckloth* v. *Bustamonte*, 412 U.S. 218, 219, 93 S.Ct. 2041, 2043, 36 L.Ed.2d 854 (1973); *Coolidge* v. *New Hampshire*, 403 U.S. 443, 454-455, 91 S.Ct. 2022, 2031-2032, 29 L.Ed.2d 564 (1971). On the basis of this

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[4] EPA was admittedly attempting to gather evidence for a planned enforcement proceeding against Dow. An action was later filed and is still pending. *See* note 1 *supra*.

[5] Paradoxically, EPA later asserts that the "open fields" exception of *Hester* v. *United States*, 265 U.S. 57, 44 S.Ct. 445, 68 L.Ed. 898 (1924) applies to this case, making EPA's actions a "non-search" and taking it outside the protection of the Fourth Amendment. (EPA Brief at 13-15). The Court, however, rejects the applicability of the "open fields" exception to this case and therefore independently concludes that a search occurred. *See* Discussion, Section IV(D) *infra*.

principle, Dow asserts that EPA's aerial search of its facility, without prior judicial scrutiny or oversight, is *per se* unreasonable.[6] Relying upon *Donovan* v. *Dewey*, 452 U.S. 594, 101 S.Ct. 2534, 69 L.Ed.2d 262 (1981), EPA responds that warrantless searches of commercial establishments are not *per se* prohibited by the Fourth Amendment, but are only impermissible if they violate a legitimate expectation of privacy.

In the area of administrative inspections, wherein this case "roughly" fits, the Supreme Court appears to have retreated somewhat from the hard and fast conclusion that warrantless searches are *per se* unreasonable.[7] In *Marshall* v. *Barlow's Inc.*, 436 U.S. at 313, 98 S.Ct. at 1820, the Court, in tracing some of its earlier decisions, used the phrase "*generally* unreasonable" to describe warrantless administrative searches. Later in the same opinion the Court stated that "the reasonableness of a warrantless search . . . will depend upon the specific enforcement needs and privacy guarantees of each statute." *Id.* at 322, 98 S.Ct. at 1825. In its most recent

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[6] Dow's position in this regard is not without sound policy considerations to support it. As the Supreme Court stated in *Katz*, 389 U.S. at 359, 88 S.Ct. at 515:

> Wherever a man may be, he is entitled to know that he will remain free from unreasonable searches and seizures. The government agents here ignored 'the procedure of antecedent justification . . . that is central to the Fourth Amendment,' a procedure that we hold to be a constitutional precondition of the kind of electronic surveillance involved in this case.

See also Marshall v. *Barlow's Inc.*, 436 U.S. at 323, 98 S.Ct. at 1825. This "constitutional pre-condition" is the genesis of this Court's ultimate conclusion in this case that *at a minimum*, EPA should have secured an ex parte warrant before carrying out the aerial search. *See* note 20 and accompanying text, *infra*.

[7] The Sixth Circuit, however, continues to adhere to the principle that warrantless administrative searches are *per se* unreasonable. *United States* v. *Blue Diamond Coal Co.*, 667 F.2d 510 (CA 6, 1981).

decision in this area, the Court in *Donovan* v. *Dewey*, 452 U.S. at 599, 101 S.Ct. at 2538, 69 L.Ed.2d at 269-270, announced that:

> . . . the Fourth Amendment protects the interest of the owner of property in being free from *unreasonable* intrusions onto his property by agents of the government. Inspections of commercial property may be unreasonable if they are not authorized by law or are unnecessary for the furtherance of federal interests.
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> * * *
>
> . . . a warrant may not be constitutionally required when Congress has reasonably determined that warrantless searches are necessary to further a regulatory scheme and the federal regulatory presence is sufficiently comprehensive and defined that the owner of commercial property cannot help but be aware that his property will be subject to periodic inspections undertaken for specific purposes.[8]

On the basis of this authority, the Court agrees with the EPA that, under the facts of this case, the Fourth Amendment inquiry does not end — with a decision adverse to the government — once it is established that a warrantless administrative search occurred. The question must turn on whether EPA's authority under the Clean Air Act meets the "sufficiently comprehensive

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[8] This Court's citation of the language above is not to suggest that the Court finds a parallel between the authority of the EPA under the Clean Air Act, 42 U.S.C. § 7401 *et seq.*, and the Department of Labor under the Federal Mine Safety and Health Act, 30 U.S.C. § 801 *et seq.*; it does not. The language is quoted only as support for the Court's determination that a warrantless administrative inspection is not *per se* unreasonable, and that a more sensitive reading of the Fourth Amendment is required in this case.

and defined" criteria of *Donovan* v. *Dewey, supra,* or whether the search violated a reasonable expectation of privacy. *See United States* v. *Taborda,* 635 F.2d 131, 136 (CA 2, 1980); *United States* v. *DeBacker,* 493 F.Supp. 1078, 1081 (WD Mich., 1980).

B. *Administrative Inspection*

The question of the reasonableness of a commercial entity's expectation of privacy is necessarily intertwined with, and must be considered in the context of, the Supreme Court's decisions in the area of administrative inspections.[9] Most recent in this relatively short line of authority is *Marshall* v. *Barlow's Inc., supra,* and *Donovan* v. *Dewey, supra.*

Dow asserts that *Barlow's,* wherein the Court held that a warrantless administrative inspection under the Occupational Safety and Health Act, 29 U.S.C. § 657(a) (1970) (OSHA) violated the Fourth Amendment, controls this case. EPA, on the other hand, maintains that *Dewey,* which upheld a warrantless administrative search under the Federal Mine Safety and Health Act, § 103(a), 30 U.S.C. § 813(a) (1977) (FMSHA), controls the present facts. For the reasons expressed below, the Court holds that this case is governed by the principles and rationale of *Barlow's.*

The Fourth Amendment prohibition against unreasonable searches was extended to administrative inspections of private commercial property nearly a decade and a half ago. *Camara* v. *Municipal Court,* 387 U.S. 523, 87 S.Ct. 1727, 18 L.Ed.2d 930 (1967); *See* v. *City of Seattle,* 387 U.S. 541, 87 S.Ct. 1737, 18 L.Ed.2d 943 (1967). The

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[9] As the Court stated in *Marshall* v. *Barlow's Inc.,* 436 U.S. at 313, 98 S.Ct. at 1820, citing *Katz* v. *United States, supra,* "certain industries have such a history of government oversight that no reasonable expectation of privacy could exist . . ."

reason for this extension was found in the basic purpose of the amendment, which is "to safeguard the privacy and security of individuals against arbitrary invasions of government officials." *Camara*, 387 U.S. at 528, 87 S.Ct. at 1730. Unlike searches of private homes, however, which generally must be conducted pursuant to a warrant in order to be reasonable, "legislative schemes authorizing warrantless administrative searches of commercial property do not necessarily violate the Fourth Amendment." *Dewey*, 452 U.S. at 598, 101 S.Ct. at 2538, 69 L.Ed.2d at 268.

The touchstone of any decision on the legality of a warrantless administrative search is a consideration of the type of business involved, and an analysis of the "pervasiveness and regularity" of the applicable legislative scheme. *Dewey, supra*, 452 U.S. at 604, 101 S.Ct. at 2541, 69 L.Ed.2d at 273. *Barlow's* and its progeny, *Camara* and *See*, created the general rule that absent consent, a warrant is constitutionally required before an administrative inspection may be conducted. From this general rule, certain narrowly defined exceptions have been carved out. In *Colonnade Catering Corp.* v. *United States*, 397 U.S. 72, 73, 90 S.Ct. 774, 775, 25 L.Ed.2d 60 (1970), the Supreme Court recognized that because the alcoholic beverage industry had long been "subject to close supervision and inspection," Congress enjoyed "broad power to design such powers of inspection . . . as it deems neccessary to meet the evils at hand." *Id.* at 76-77, 90 S.Ct. at 776-777. Similarly, in *United States* v. *Biswell*, 406 U.S. 311, 92 S.Ct. 1593, 32 L.Ed.2d 87 (1972), the Court concluded that the federal statute regulating firearms provided a sufficiently comprehensive and predictable inspection scheme that the warrantless inspections mandated under the statute did not violate the Fourth Amendment. *Id.* at 316, 92 S.Ct. at 1596. Most recently, in *Donovan* v. *Dewey, supra*, the Court held that "warrant-

less inspections required by the Mine Safety and Health Act do not offend the Fourth Amendment. *Id.* 452 U.S. at 602, 101 S.Ct. at 2539, 69 L.Ed.2d at 271. The Court explained that:

> . . . the Mine Safety and Health Act applies to industrial activity with a notorious history of serious accidents and unhealthful working conditions. The Act is specifically tailored to address those concerns, and the regulation of mines it imposes is sufficiently pervasive and defined that the owner of such a facility cannot help but be aware that he 'will be subject to effective inspection' . . . First, the Act requires inspection of all mines and specifically defines the frequency of inspection.
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> . . . Second, the standards with which a mine operator is required to comply are all specifically set forth in the Act or in Title 30 of the Code of Federal Regulations.
>
> . . . Thus, rather than leaving the frequency and purpose of inspections to the unchecked discretion of government officers, the Act establishes a predictable and guided federal regulatory presence. Like the gun dealer in Biswell, the operator of a mine 'is not left to wonder about the purposes of the inspector or the limits of his task.'

Id. 452 U.S. at 603, 101 S.Ct. at 2540, 69 L.Ed.2d at 272 (citations omitted).[10]

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[10] Even prior to the Supreme Court's decision in *Dewey*, the Sixth Circuit had upheld a similar warrantless inspection of a sand and gravel quarry. *Marshall* v. *Nolichuckey Sand Co. Inc.*, 606 F.2d 693 (CA 6, 1979), *cert. denied*, 446 U.S. 908, 100 S.Ct. 1835, 64 L.Ed.2d 261 (1980).

EPA relies heavily on the language of *Dewey*[11], but makes no argument that EPA's authority to regulate the chemical industry under the Clean Air Act constitutes a sufficiently "predictable and guided federal regulatory presence" as to include it as an exception to the general rule prohibiting warrantless administrative inspections. This is understandable, since it is clear to this Court that no such plausible argument can be made.

Unlike the government's control over the alcohol, firearms, and mining industries, the chemical industry is not "pervasively regulated" by EPA under the Clean Air Act. EPA's authority to regulate entities such as Dow is more closely akin to the authority of the Department of Labor under OSHA which the Supreme Court reviewed in *Barlow's*. The Court described that authority as follows:

> (OSHA) imposes health and safety standards on all businesses engaged in or affecting interstate commerce that have employees . . . and authorizes representatives of the Secretary to conduct inspections to ensure compliance with the act . . . However, the Act fails to tailor the scope and frequency of such administrative inspections to the particular health and safety concerns posed by the numerous and varied businesses regulated by the statute.

Donovan v. *Dewey*, 452 U.S. at 601, 101 S.Ct. at 2539, 69 L.Ed.2d at 270 (citations omitted).

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[11] EPA's reliance on *Dewey* appears to be for the proposition that the lesser degree of Fourth Amendment protection accorded commercial premises in general, and the federal regulation of the chemical industry in particular, undercuts and thereby diminishes Dow's reasonable expectation of privacy. This assertion is addressed by the Court later in this opinion. *See* Discussion, Section IV(C) *infra*.

As one commentator, himself a former Assistant Regional Counsel for the EPA, accurately observed:

> EPA, like OSHA, regulates all kinds of industries. Once again, the test is not whether the industry is regulated, but whether it is *pervasively* regulated. Although certain environmental statutes, the Federal Water Pollution Control Act (FWPCA), for example, are licensing statutes in the very broadest sense, such licensing and regulation is distinguishable from that which was present in *Colonnade* or *Biswell*. The scope of the FWPCA is much more akin to the kind of regulation that exists under the auspices of OSHA. Both OSHA and EPA regulate a broad spectrum of different industries pursuant to legislative mandates. However, those myriad businesses are not necessarily highly regulated industries which may be said by implication to consent to warrantless inspections. In that sense, *Barlow's, Inc.*'s finding of the non-applicability of this exception in an OSHA context also applies to EPA.

Martin, *EPA and Administrative Inspections*, 7 Fla.St.L.Rev., 123, 131-132 (1979).

The only statutory provision authorizing administrative inspections in the Clean Air Act is Section 114, 42 U.S.C. § 7414.[12] This provision potentially applies to any number of different industries. By its terms it neither requires or defines the type or frequency of inspections, nor contains standards by which they are to be conducted. In fact, on its face, this provision does not

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[12] Section 114 of the Clean Air Act provides in pertinent part that:

> (a) For the purpose . . . (ii) of determining whether any person is in violation of any such standard or any require-

(*continued on following page*)

appear to allow forced entry without some form of prior judicial oversight.[13] The Supreme Court has already recognized this limitation in the Clean Air Act in its *Barlow's* decision wherein it observed:

> Some statutes already envision resort to federal-court enforcement when entry is refused, employing specific language in some cases . . .
>
> > (an) example is the Clean Air Act, which grants federal district courts jurisdiction "to require compliance" with the Administrator of the Environmental Protection Agency's attempt to inspect under 42 U.S.C. § 7414, when the Administrator has commenced "a civil action" for injunctive relief or to recover a penalty.

436 U.S. at 321 n.18, 98 S.Ct. at 1825 n.18 and accompanying text.

In addition, the legislative history of the Clean Water Act, 33 U.S.C. §§ 1251-1376, also supports the observation that forced entry, or warrantless inspection, is not

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> ment of such a plan, or (iii) carrying out any provision of this chapter . . .
>
> (2) the Administrator or his authorized representative, upon presentation of his credentials —
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> (A) shall have a right of entry to, upon, or through any premises of such person or in which any records required to be maintained under paragraph (1) of this section are located, and
>
> (B) may at reasonable times have access to and copy any records, inspect any monitoring equipment or method required under paragraph (1), and sample any emissions which such person is required to sample under paragraph (1).

[13] *See* note 27 and accompanying text, *infra*.

contemplated under the Clean Air Act. The Senate Report to the Act states that "*As under the Clean Air Act*, the Committee expects that authority to enter will be used judiciously and upon any challenge to entry the Committee expects the Administrator to obtain the necessary warrant." S.Rep.No. 92-44, 92d Cong., 1st Sess. 62, *reprinted in* [1972] U.S.Code Cong. & Ad.News 3668, 3729 (emphasis added).

The inescapable conclusion of the foregoing judicial and legislative pronouncements is that the holding and rationale of *Barlow's* controls in this case. Therefore, EPA's warrantless aerial search of Dow's plant cannot withstand Fourth Amendment scrutiny. The repugnance of this form of warrantless inspection activity was well stated by the Supreme Court in *Barlow's*, 436 U.S. at 323-324, 98 S.Ct. at 1825-1826:

> The authority to make warrantless searches devolves almost unbridled discretion upon executive and administrative officers, particularly those in the field, as to when to search and whom to search. A warrant, by contrast, would provide assurances from a neutral officer that the inspection is reasonable under the Constitution, is authorized by statute, and is pursuant to an administrative plan containing a specific neutral criteria. Also, a warrant would then and there advise the owner of the scope and objects of the search, beyond which limits the inspector is not expected to proceed. These are important functions for a warrant to perform, functions which underlie the Court's prior decisions that the Warrant Clause applies to inspections for compliance with regulatory statutes.[14]

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[14] It is indeed curious that in the present case EPA argues that its warrantless search of Dow was not inconsistent with the *Barlow's*

(*continued on following page*)

For these reasons, the Court concludes that EPA's aerial photography of Dow's facilities, in an admitted quest for evidence, constituted an unreasonable search in violation of the Fourth Amendment.

In the typical administrative inspection case the Court's Fourth Amendment inquiry would halt at this point. This case, however, is not "typical" in any sense of the word. We are not here dealing with an ordinary *on-site* administrative search, neither are we faced with one of the more common Fourth Amendment challenges. Indeed, the Court's research suggests that, considering the facts before it, it is venturing into unchartered constitutional territory.

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decision, when a published EPA memorandum suggests that as a matter of agency policy, its position is otherwise:

> *Barlow's* clearly establishes that the owner does have the right to ask for a warrant under normal circumstances. Therefore, refusal to allow entry for inspectional purposes will not lead to civil or criminal penalties if the refusal is based on the inspector's lack of a warrant and one of the exemptions discussed in Part C does not apply. If the owner were to allow the inspector to enter his establishment only in response to a threat of enforcement liability, it is quite possible that any evidence obtained in such an inspection would be inadmissible. An inspector may, however, inform the owner who refuses entry that he intends to seek a warrant to compel the inspection. In any event, when entry is refused, the inspector should leave the premises immediately and telephone the designated Regional Enforcement Attorney as soon as possible for further instructions. The Regional Enforcement Attorney should contact the U.S. Attorney's Office for the District in which the establishment desired to be inspected is located and explain to the appropriate Assistant United States Attorney the need for a warrant to conduct the particular inspection.

EPA Memorandum on Inspection Procedures, 41 Envir.Rep. (BNA) 2451, 2452 (April 11, 1979). It is undisputed that in this case, Dow specifically refused EPA's request for entry prior to the flyover.

Both Dow and EPA devoted much of their attention, in briefing and arguing this case, to an analysis of the present facts under the Supreme Court's decision in *Katz* v. *United States*, 389 U.S. 347, 88 S.Ct. 507, 19 L.Ed.2d 576 (1967) and subsequent interpretive decisions. The Fourth Amendment analysis, as applied to this case, focuses on the question of whether Dow had a reasonable expectation of privacy which was violated by EPA's flyover and photography of Dow's plant.

The Court is fairly certain that the Fourth Amendment issue raised in this case is properly resolved on the basis of an administrative inspection analysis alone. Given, however, the atypical nature of this case, the fact that the parties have explored the *Katz* analysis at length, and the additional fact that this analysis raises several important sub-issues and policy considerations, the Court will alternatively review the facts before it under the framework of *Katz*.

C. *Expectations Of Privacy*

[3] In *Katz* v. *United States*, 389 U.S. at 351-352, 88 S.Ct. at 511-512, the Supreme Court observed that:

> the Fourth Amendment protects people, not places. What a person knowingly exposes to the public even in his own home or office, is not a subject of Fourth Amendment protection . . . But what he seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected.

Justice Harlan, in a concurring opinion which has since become the prevailing formulation for evaluating the legality of a search, *see Rakas* v. *Illinois*, 439 U.S. 128, 99 S.Ct. 421, 58 L.Ed.2d 387 (1978); *United States* v. *Bailey*, 628 F.2d 938 (CA 6, 1980); erected a twofold requirement to determine whether one possesses an

expectation of privacy which is protectable under the Fourth Amendment. This test was best described by Justice Blackmun in *Smith* v. *Maryland*, 442 U.S. 735, 736, 740, 99 S.Ct. 2577, 2578, 2580, 61 L.Ed.2d 220 (1979):

> . . . the application of the Fourth Amendment depends on whether the person invoking its protection can claim a 'justifiable,' a 'reasonable,' or a 'legitimate expectation of privacy' that has been invaded by government action . . . This inquiry, as Mr. Justice Harlan aptly noted in his Katz concurrence, normally embraces two discrete questions. *The first is whether the individual, by his conduct, has 'exhibited an actual (subjective) expectation of privacy,'* 389 U.S. at 361 [88 S.Ct. 507 at 516, 19 L.Ed.2d 576] — whether, in the words of the Katz majority, the individual has shown that 'he seeks to preserve [something] as private.' Id. at 351 [88 S.Ct. 507 at 511, 9 L.Ed.2d 576]. *The second question is whether the individual's subjective expectation of privacy is 'one that society is prepared to recognize as "reasonable."'* id., at 361 [88 S.Ct. 507 at 516, 19 L.Ed.2d 576] — whether, in the words of the Katz majority, the individual's expectation, viewed objectively, is 'justifiable' under the circumstances. (citations omitted; emphasis added).

This Court must now apply this two-part test to the facts before it.

1. DOW'S PRIVACY EXPECTATION

[4, 5] The extent of any claimed privacy expectation must be evaluated in light of the identity of the party seeking to invoke the protections of the Fourth Amendment. *Donovan* v. *Dewey, supra; GM Leasing Corp.* v. *United States*, 429 U.S. 338, 97 S.Ct. 619, 50 L.Ed.2d 530

(1977). While the expectation of privacy that the owner of commercial property enjoys "differs significantly from the sanctity accorded an individual's home," *Id.*, it is clear that a commercial establishment may possess a protectable privacy expectation under the Fourth Amendment. *Marshall* v. *Barlow's Inc., supra.*

[6] The first part of the *Katz* test appears to require that a party's actual state of mind be determined. Various courts, however, have interpreted this aspect of the test as an "objective" rather than a "subjective" requirement. *United States* v. *Taborda,* 635 F.2d 131, 137 (CA 2, 1980); *United States* v. *Kim,* 415 F.Supp. 1252, 1256-1257 (D.Haw., 1976); *accord United States* v. *Bailey,* 628 F.2d 938, 942-943 (CA 6, 1980). This Court agrees with this interpretation, and concludes that the essence of the first prong of the test is that the party "must have acted in such a way that it would have been reasonable for him to expect that he would not be observed." *United States* v. *Taborda, supra.* Therefore, the Court must look to objective manifestations of any claimed privacy expectation.

[7] The first and most obvious indicia of a privacy expectation is ownership. *Wilson* v. *Health and Hospital Corporation of Marion City,* 620 F.2d 1201, 1212-1213 (CA 7, 1980). Dow's ownership of the Midland complex is undisputed. Ownership of property alone, however, is insufficient to claim an expectation of privacy. The owner must demonstrate that the premises were kept in a closed and secured condition. *Id.*

Dow cites the following measures as evidence that it has manifested and exhibited an expectation of privacy in its plant:

1. A chain-link fence at least 8 feet high installed completely around the production facility;

2. gates for ingress and egress at various intervals in the fence have an attendant (guard) on duty when any given gate is in operation to admit or allow people to leave the facility;

3. closed-circuit television surveillance for continuously monitoring the various entrance and exit gates and to monitor the area along the fence surrounding the facility;

4. alarm systems which will indicate unauthorized entry at various locations;

5. motion detectors at strategic locations to indicate movement of personnel in certain restricted areas within the facility;

6. roving patrols which travel throughout the facility and guard the perimeter to augment the other security systems;

7. liaison with local public law enforcement officials including radio communication to assist in the apprehension of persons engaged in unlawful activities relating to the production facility;

8. a requirement that employees entering the facility must exhibit an identification bade [*sic*] in every instance of entry;

9. a requirement that non-employees who wish to visit the facility must be approved and must obtain a visitors pass including a bade [*sic*] which must be exhibited at all times while in the facility;

10. a requirement that non-employees who have been approved to visit be greatly restricted in their movements and that some areas of the facility remain off-limits to all non-employees;

11. a requirement that *cameras by anyone other than an authorized representative of Dow are prohibited* at all times and in all places in the facility;

12. a requirement that persons visiting for technical reasons must obtain a technical pass which provides among other things that the visitor will not disclose any technical information learned as an incidence to his visit;

13. a staffing program such that security personnel are on duty twenty-four hours a day and seven days a week with at least twenty-five such people on duty at all times and with about fifty people on duty during normal duty hours;

14. a security budget whereby Dow spent at least 3.25 million dollars in each of the last ten years on the security of the Midland production facility; and

15. a disposal or drawings etc, that requires that, in the event the engineering drawings and/or blueprints of a specific production plant were to be disposed of, for example, at the conclusion of construction, the drawings and/or blueprints would be packaged and incinerated under the direction of security personnel who would also witness the incineration.

In addition, Dow points out that its employees and contractors sign secrecy agreements, and that its plant layout is designed in such a way that the more sensitive, proprietary areas are not visible to persons on the public right-of-way outside the fence. (Dow Brief at 11-12).

EPA responds to these assertions by arguing that Dow has sought only to restrict *access* to its plant and to protect its trade secrets from the eyes of its competitors,

it has not attempted to conceal the *exterior* of its plant from view. Therefore, EPA maintains that Dow has failed to satisfy the first prong of *Katz*. This Court cannot agree.

As previously explained[15], EPA's reference to the *exterior* of Dow's plant mischaracterizes what was actually captured in the aerial photographs. The photographs depict *internal* regions of the plant in such vivid detail, capable of further enlargement and magnification, as to defy simply being described as views of the *exterior* of the facility. When these photographic results are combined with the uncontroverted fact that Dow designed its plant so as to conceal the more sensitive, proprietary areas in the inner regions of the complex, EPA's position loses its persuasive weight.

The Court in *Katz*, 389 U.S. at 351-352, 88 S.Ct. at 511-512, specifically stated that what a person "seeks to preserve as private, *even in an area accessible to the public*, may be constitutionally protected." (emphasis added). Dow would never be able to show that it possesses a legitimate privacy expectation in its *entire* plant. Obviously, much of the plant is observable by the general public, both from the ground and from the air. But what is visible to the public are areas which Dow, either purposely or due to some commercial or architectural impracticability, has decided to allow the general public to see. Notwithstanding this common sense limitation, Dow may still possess an expectation of privacy with respect to *interior* regions of its facility.

The Fourth Amendment should not be read as to require the citizens or businesses of this nation to take unreasonable measures to protect themselves from surreptitious governmental searches. This Court is not pre-

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[15] *See* note 3 and accompanying text, *supra*.

pared to conclude that Dow must build a dome over its entire plant before it can be said to have manifested or exhibited an expectation of privacy. *See United States* v. *Allen*, 633 F.2d 1282, 1289 (CA 9, 1980), *cert. denied*, ___ U.S. ___, 102 S.Ct. 133, 70 L.Ed.2d 112 (1981). Rather, what Dow "seeks to preserve as private," and then takes reasonable precautions to safeguard, is entitled to the protection of the Fourth Amendment. *Katz* v. *United States, supra*. On this basis, the Court finds that Dow has satisfied the first prong of the *Katz* test.

2. REASONABLENESS OF DOW'S PRIVACY EXPECTATION

The more difficult question to decide in this case is the second prong of *Katz:* whether Dow's expectation of privacy is one that society is prepared to accept as reasonable. EPA proposes several factors which should be considered in resolving this inquiry.[16] On the basis of these factors, EPA's position is that even if Dow has exhibited an expectation of privacy, it is not one that society accepts as reasonable.

Some of the factors proposed by EPA pertain either to the issue of whether Dow manifested a privacy expectation[17] or whether the "open fields" exception to the Fourth Amendment, *Hester* v. *United States*, 265 U.S. 57, 44 S.Ct. 445, 68 L.Ed. 898 (1924), is applicable to this

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[16] The factors proposed by EPA include:

1. Lawfulness of Location From Which Observation was made
2. Equipment Used to Make the Observation
3. Type of Location Observed
4. Nature of Objects or Activities Observed
5. Efforts to Conceal Objects or Activities from View
6. Frequency of Overflights

[17] This is true of factors 3 through 6.

case.[18] Some of its suggested factors, however, do go to the question of reasonableness and therefore merit some discussion.

In describing the "type" and "nature" of the location observed as 2 factors to be considered, EPA argues that "it is hard to imagine anything larger or more conspicuous than a 2000 acre chemical manufacturing plant located in an urban area of a city." (EPA Brief at 20). As stated previously, the Court would agree that Dow could not possess a reasonable expectation of privacy in its *entire* plant. It may, however, exhibit such an expectation with respect to internal areas of the plant.

While not a Fourth Amendment case, the holding of the Fifth Circuit in *E. I. duPont de Nemours & Co. Inc.* v. *Christopher*, 431 F.2d 1012 (CA 5, 1970), *cert. denied*, 400 U.S. 1024, 91 S.Ct. 581, 27 L.Ed.2d 637 (1971), which the Supreme Court cited approvingly in *Kewanee Oil Co.* v. *Bicron Corp.*, 416 U.S. 470, 476 n. 5, 94 S.Ct. 1879, 1883 n. 5, 40 L.Ed.2d 315 (1974), is instructive. *duPont* filed an action against a competitor, under Texas law, for using aerial surveillance and photography to obtain its trade secrets. In ruling in duPont's favor that aerial photography was an improper method of discovering trade secrets, the Court reasoned that:

> . . . we realize that industrial espionage of the sort here perpetrated has become a popular sport in some segments of our industrial community. However, our devotion to free wheeling industrial competition must not force us into accepting the law of the jungle as the standard of morality expected in our commercial relations. Our tolerance of the espionage game must cease when the

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[18] This is true of at least factors 1 and 2, perhaps all of them. *See* Discussion, Section IV(D) *infra*.

protections required to prevent another's spying cost so much that the spirit of inventiveness is dampened. *Commercial privacy must be protected from espionage which could not have been reasonably anticipated or prevented.* We do not mean to imply, however, that everything not in plain view is within the protected vale, nor that all information obtained through every extra optical extension is forbidden. Indeed, for our industrial competition to remain healthy there must be breathing room for observing a competing industrialist. A competitor can and must shop his competition for pricing and examine his products for quality, components, and methods of manufacture. *Perhaps ordinary fences and roofs must be built to shut out incursive eyes, but we need not require the discoverer of a trade secret to guard against the unanticipated, the undetectable, or the unpreventable methods of espionage now available.*

* * *

To require duPont to put a roof over the unfinished plant to guard its secret would impose an enormous expense to prevent nothing more than a school boy's trick. We introduce here no new or radical ethic since our ethos had never given moral sanction to piracy. The market place must not deviate far from our mores. *We should not require a person or corporation to take unreasonable precautions to prevent another from doing that which he ought not to do in the first place.* Reasonable precautions against predatory eyes we may require, but an impenetrable fortress is an unreasonable requirement, and we are not disposed to burden industrial inventors with such a duty in order to protect the fruits of their efforts. *Id.* at 1016-1017 (emphasis added).

This statement of policy reasons in support of a state tort law decision nonetheless provides guidance to the Court here. As in *duPont*, the present case also involves claims of trade secret appropriation. The rationale of *duPont* supports this Court's belief that commercial privacy may be expected and exhibited, and may be deemed reasonable and legitimate by society. Just as duPont need not be required to take "unreasonable precautions" to prevent aerial photography of its plant as a prerequisite to a tort action, likewise Dow should not be so required in order to claim the protection of the Fourth Amendment.

Society has spoken in this area through Congress, the State Legislatures, and the courts. Federal law, under the Trade Secrets Act, 18 U.S.C. § 1905, makes it a crime for government employees to disclose trade secret information. The Clean Air Act itself, in Section 114(c), 42 U.S.C. § 7414(c), addresses this concern for propriety information. Moreover, EPA has adopted regulations providing for protection of trade secrets. 40 CFR 2.201-2.309. Michigan law, in addition to recognizing a tort action, also makes it a crime to appropriate trade secrets, M.C.L.A. § 752.772, as well as to invade one's privacy by means of surveillance. M.C.L.A. §§ 750.539a-539b. These legislative and judicial pronouncements are reflective of a social acceptance of Dow's privacy expectation as reasonable.

There is some dispute in this case as to whether use of sophisticated aerial photography equipment constitutes visually enhanced surveillance.[19] Dow suggests that "a sophisticated aerial camera, in the hands of a government agent, is even more constitutionally repugnant than a telescope because it enables the searcher to permanently capture the image for later detailed study

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[19] *supra* note 2.

at leisure." (Dow Brief at 42). EPA, on the other hand, posits that this equipment captures nothing more than that which is already visible to the naked eye. (EPA Brief at 17-18; Transcript of oral argument at 29-32).

Having examined the photographs, the Court is unable to agree with EPA's position that "the camera can't see what the eye can't see" *Id.* On the contrary, when flying at 1,200 or 5,000 feet, the eye can discern only the basic sizes, shapes, outlines, and colors of the objects below. In this case, the finest precision aerial camera available was used to take the EPA photographs. The camera successfully captured vivid images of Dow's plant which EPA could later analyze under enlarged and magnified conditions. In doing so, the camera saw a great deal more than the human eye could ever see. The court therefore would agree with Dow that the use of a sophisticated aerial camera is, at a minimum, on a par with other methods of visually enhanced surveillance in terms of its intrusiveness.

In *United States* v. *Taborda*, 635 F.2d 131 (CA 2, 1980), the Second Circuit was faced with the issue of whether observation by means of a high-powered telescope constituted the type of intrusion against which the Fourth Amendment protects. Consistent with *Katz*, the Court concluded:

> . . . observation of objects and activities inside a person's home by unenhanced vision from a location where the observer may properly be does not impair a legitimate expectation of privacy. However, *any enhanced viewing of the interior of a home does impair a legitimate expectation of privacy and encounters the Fourt Amendment's warrant requirement,* unless circumstances create a traditional exception to that requirement. *Id.* at 139 (emphasis added).

See also United States v. Kim, 415 F.Supp. 1252, 1254-1256 (D.Hawaii, 1976). Since the present case involved an intrusion into the *interior* of Dow's palnt, as the Court has previously defined that term, the enhanced viewing in this case similarly encounters the Fourth Amendment's warrant requirement.

[8] Turning the question of "reasonableness" around for a moment — i.e. looking at the reasonableness of the government's actions — it is likely that society would view many forms of visually enhanced surveillance by the government as unreasonable. This is particularly so when it is used in a non-criminal context. *See United States* v. *Bailey*, 628 F.2d 938, 944 (CA 6, 1981). In this age of ever-advancing and potentially unlimited technology the government should be made aware that it does not possess carte blanche authority to utilize sophisticated surveillance methods to keep watch over citizens or businesses not suspected of any criminal activity. As the government's arsenal of technologically-advanced surveillance equipment expands, so too the protections of the Fourth Amendment should broaden in response. *United States* v. *Holmes* 521 F.2d 859, 866 (CA 5, 1975), *United States* v. *Kim*, 415 F.Supp. at 1257.

The Court is reminded of the powerfully eloquent dissent of Justice Douglas in *United States* v. *White*, 401 U.S. 745, 756, 760-761, 91 S.Ct. 1122, 1128, 1130-1131, 28 L.Ed.2d 453 (1971):

> Electronic surveillance is the greatest leveler of human privacy ever known. How most forms of it can be held 'reasonable' within the meaning of the Fourth Amendment is a mystery. To be sure, the Constitution and Bill or Rights are not to be read as covering only the technology know in the 18th century. Otherwise its concept of 'commerce' would be hopeless when it comes to the manage

> ment of modern affairs. At the same time the concepts of privacy which the Founders enshrined in the Fourth Amendment vanish completely when we slavishly allow an all-powerful government, proclaiming law and order, efficiency, and other benign purposes, to penetrate all the walls and doors which men need to shield them from the pressures of a turbulent life around them and give them the health and strength to carry on.
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> * * *
>
> . . . Electronic aids add a wholly new dimension to eavesdropping. They make it more penetrating more indiscriminate, more truly obnoxious to a free society. Electronic surveillance, in fact, makes the police omniscient; and police omniscience is one of the most effective tools of tyranny.

These same concerns are not entirely absent from this case. While the EPA did not engage in any form of "Star Wars" surveillance, and only used equipment which was commercially available, if this warrantless investigatory method is countenanced in this case, where will courts draw the line? In this regard the Court finds merit in the language of *Dean* v. *Superior Ct.*, 35 Cal. App.3d 112, 110 Cal.Rptr. 585, 588-589 (1973):

> Expectations of privacy are not earthbound. The Fourth Amendment guards the privacy of human activity from aerial no less than terrestrial invasion. At a recent but relatively primitive time, an X-2 plane could spy on ground activities from a height of 50,000 feet. Today's sophisticated technology permits overflights by vehicles orbiting at an altitude of several hundred miles. Tomorrow's sophisticated technology will supply optic and photographic devices for minute observations

> from extended heights. Judicial implementations of the Fourth Amendment need constant accommodation to the ever-intensifying technology of surveillance. In analyzing claims of immunity from aerial surveillance by agents of government, the observer's altitude is a minor factor. Horizontal extensions of the occupant's terrestrial activity form a more realistic and reliable measure of privacy than the vertical dimension of altitude . . . Reasonable expectations of privacy may ascend into the airspace and claim Fourth Amendment protection.

The conclusion of this brief turn-around of the "reasonableness" question is that a society which views certain forms of visually enhanced governmental surveillance as *unreasonable*, would likely accept as *reasonable*, Dow's expectation to be free from this form of intrusion.

A final argument raised by EPA, which, at first blush, is not without a good deal of merit, is that the public interest in effective pollution control outweighs any privacy expectation which Dow may have. *United States* v. *Martinez-Fuerte*, 428 U.S. 543, 555, 96 S.Ct. 3074, 3081, 49 L.Ed.2d 1116 (1976). In this regard EPA emphasizes the utility of warrantless aerial overflights and photography as a tool to monitor compliance with the federal pollution laws.

All of us certainly recognize the need for aggressive and effective pollution control. In this regard we, as citizens, certainly desire EPA to possess all the tools necessary to carry out its legislative mandate to effectuate and enforce the federal pollution laws. For 2 reasons, however, EPA's "public interest — pollution control" argument does not outweigh Dow's expectation of privacy under the facts of this case.

First, the Court finds very little pollution control utility in the investigatory method used by EPA in this case. EPA asserts that it had 2 purposes for the overflight: to get photographs of the "general layout of the plant in relation to the power houses," and to confirm "excess emissions from the power houses." (EPA Brief at 21). The facts are uncontroverted, however, that Dow had earlier given schematic drawings of the power houses to EPA voluntarily. EPA could have made further requests for similar drawings, maps, or even photographs, of the general layout from Dow. Furthermore, it is difficult to place credence in EPA's assertion that a goal of the aerial photography was to confirm excess emissions. EPA had little or no control over when the photographs would be taken by Abrams, and no knowledge of whether there would be any emissions at the moment they were taken.

A second reason militating against EPA's position is that it is difficult to justify a need for the agency to conduct *warrantless* aerial searches. It appears to the Court that *at a minimum,*[20] an *ex parte* warrant procedure would best strike the balance between Dow's expectation of privacy and EPA's asserted need to conduct surprise inspections of this sort. *See generally Note, Rationalizing Administrative Searches,* 77 Mich.L.Rev. 1291, 1329 n. 184 (1979). As well stated by one commentator, "since the normal inspection procedure for *EPA* requires some advance preparation and advance decisions concerning which facilities to inspect, the additional step of obtaining a search warrant does not seem to be a tremendous burden in light of the constitutional rights involved." Martin, *EPA and Administrative Inspections,* 7 Fla. St.L.Rev. 123, 130 (1979); *see also EPA*

[20] *See* n. 27 *infra*

Memorandum on Inspection Procedures, 41 Envir.Rep. (BNA) 2451, 2452 (April 11, 1979).

In terms of policy considerations, the public interest in governmental compliance with constitutional and statutory provisions is also involved in this case. *United States* v. *Martinez-Fuerte, supra.* This consideration would appear to lend support to Dow's assertion that its privacy expectation is one which society is prepared to accept as reasonable.

For all these reasons, the Court finds that Dow has exhibited an actual expectation of privacy, and that that expectation is one the society is prepared to recognize as reasonable. Therefore, under a *Katz* analysis, the Court again concludes that EPA's aerial photography of Dow's plant constituted an unreasonable search in violation of the Fourth Amendment.

D. *"Open Fields"*

In *Hester* v. *United States,* 265 U.S. 57, 59, 44 S.Ct. 445, 446, 68 L.Ed. 898 (1924) the Supreme Court held that "the special protection accorded by the Fourth Amendment . . . is not extended to the open fields." In other words a visual observation of something in plain view — *i.e.* observable by members of the public — does not constitute a search within the meaning of the Fourth Amendment.[21] This ruling was followed in *Air Pollution Variance Bd.* v. *Western Alfalfa Corp.*, 416 U.S. 861, 94 S.Ct. 2114, 40 L.Ed.2d 607 (1974), which involved a constitutional challenge to a health inspector's warrantless observation of "plumes of smoke being emitted

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[21] The "plain view" doctrine of *Coolidge* v. *New Hampshire,* 403 U.S. 433, 464-468, 91 S.Ct. 2022, 2037-2039, 20 L.Ed.2d 564 (1971) is not involved in this case. That doctrine is not a justification to search, but a reason to extend an otherwise valid search. *See Wilson* v. *Health and Hospital Corporation of Marion City,* 620 F.2d 1201, 1209 (CA 7, 1980).

from . . . chimneys" on the premises of a corporation. *Id.* at 863, 94 S.Ct. at 2115. The Court held that, "the field inspector did not enter the plant of offices . . . He had cited what anyone in the city who was near the plant could see in the sky — plumes of smoke . . . [therefore] he was well within the 'open fields' exception . . . approved in Hester." *Id.* at 864-865, 94 S. Ct. at 2115-2116.

EPA asserts that the "open fields" exception applies in this case and therefore validates its actions. In addition to the foregoing authority, EPA cites 2 recent federal cases, *United States* v. *Allen*, 633 F.2d 1288 (CA 9, 1980), *cert. denied*, __ U.S. __, 102 S.Ct. 133, 70 L.Ed.2d 112 (1981), and *United States* v. *DeBacker*, 493 F.Supp. 1078 (WD Mich., 1980), and 9 state cases[22] in support of its position. This Court finds the cases cited either distinguishable or nondispositive, and concludes that the "open fields" exception does not apply in this case.

In *United States* v. *Oliver*, 657 F.2d 85 (CA 6, 1981), the Sixth Circuit relying upon the rationale of *Katz*, held that "the 'open fields' exception to the warrant requirement can no longer be automatically invoked to validate a warrantless search and seizure . . ." *Id.* at 87-88. The Court explained that "*Katz* shifted the emphasis of the test [for determining the legality of a warrantless search] from an inquiry into commonlaw property distinctions

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[22] *People* v. *St. Amour*, 104 Cal.App.3d 886, 163 Cal.Rptr. 187 (1980); *People* v. *Lashmett*, 71 Ill.App.3d 429, 27 Ill.Dec. 657, 389 N.E.2d 888 (1979); *Burkholder* v. *Superior Court*, 96 Cal.App.3d 421, 158 Cal.Rptr. 86 (1979); *State* v. *Brighter*, 589 P.2d 527 (Haw. 1979); *State* v. *Stachler*, 570 P.2d 1323 (Haw. 1977); *Plunkett* v. *City of Lakewood*, 2 Civ. 49610 (unreported decision filed Nov. 15, 1977, Cal.Ct.App.2d Dist.), *cert denied* 436 U.S. 945, 98 S.Ct. 2848, 56 L.Ed.2d 787 (1978); *People* v. *Superior Court*, 37 Cal.App.3d 836, 112 Cal.Rptr. 764 (1974); *Dean* v. *Superior Ct.*, 35 Cal.App.3d 112, 110 Cal.Rptr. 585 (1973).

to an inquiry in which the . . . reasonable expectations of privacy became the focal point." *Id.* It then concluded that:

> . . . Oliver's expectation of privacy was objectively reasonable. *Society's interest in law enforcement is not unduly hampered by requiring a warrant prior to searching a private field which has been reached through a private road exhibiting several "No Trespassing" signs and blocked by a locked gate,* unless there is an imminent threat of destruction of the evidence or there exists a high probability that the evidence will cause serious bodily harm. We are presented with no such emergency situation here.

Id. at 87 (emphasis added). *See also United States* v. *Mullinex*, 508 F.Supp. 512, 514 (ED Ky., 1980).

The Court has already found that Dow's expectation of privacy was objectively reasonable. In accordance with *Oliver*, therefore, society's interest in the enforcement of pollution laws is not unduly hampered by requiring a warrant prior to EPA's aerial search of a private manufacturing plant which is reasonably secured, especially after EPA is specifically refused entry.

Other factors take this case out of the "open fields" exception as well. As previously stated, the exception has the effect of making a plain view observation a non-search. Such a result, however, would be anomalous in this case. EPA has already admitted that it was engaged in a "search" and a "quest for evidence."[23] Therefore, the question before this Court is really limited to whether that admitted search was *unreasonable* under the Fourth Amendment.

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[23] *See* note 4 and text accompanying, *supra*.

The Court has already described why it finds that the EPA aerial photographs "more closely approximate a view of the *interior* of the plant than the *exterior*."[24] This distinction is relevant to the "open fields" inquiry. *See Wilson* v. *Health & Hospital Corporation of Marion City*, 620 F.2d 1201, 1210 (CA 7, 1980). EPA was able to observe a great deal more than "what anyone in the city who was near the plant could see," *Air Pollution Variance Bd., supra*, in its detailed aerial photographs. Granted, other aircraft fly in the vicinity of the Dow plant on occasion. The persons in those aircraft are likely able to observe Dow's plant below. But it is unlikely that those persons are able to see minute, internal details of the plant, without the type of equipment used by EPA.

One commentator, writing specifically about this case, made the following observation:

> The recently filed Dow Chemical case against EPA seems to involve a fact situation where the open fields exception may have some applicability. However, aerial surveillance would seem to push the exception too far. Although *E.I. duPont de Nemours and Co. Inc.* v. *Christopher*, 431 F.2d 1012 (5th Cir., 1970), *cert denied* 400 U.S. 1024 [91 S.Ct. 581, 27 L.Ed.2d 637,] *rehearing denied*, 401 U.S. 967 [91 S.Ct. 968, 28 L.Ed.2d 250] (1971), involved industrial espionage carried out by means of aerial surveillance, what the court said there would seem to apply at least in spirit to the Dow Chemical case:
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> > [We] realize that industrial espionage of the sort here perpetrated has become a popular sport in some segments of our industrial

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[24] *See* note 3 and text accompanying, *supra*.

> community. However, our devotion to free wheeling industrial competition must not force us into accepting the law of the jungle as the standard of morality expected in our commercial relations.
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> 431 F.2d at 1016. The important question that has to be faced is what is constitutionally offensive scrutiny. It would be fallacious to extend the open fields exception to the facts in *Dow* because if it were, advanced technology has given us microphones and cameras that can make an enclosed room an "open field." Spatially based criteria of eligibility for fourth amendment protection ignore the pertinent question as to what it is we wish to see preserved from the offensive scrutiny.

Martin, *EPA and Administrative Inspections*, 7 Fla.St.L.Rev. 123, 134 n. 50 (1979). This viewpoint is in accord with the holding of *United States* v. *Oliver, supra,* and this Court's factual findings under *Katz*. *See also United States* v. *Taborda*, 635 F.2d 131, 139 (CA 2, 1980).

The federal cases cited by EPA do not control this case.[25] While both involved aerial surveillance, both are

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[25] Neither do the state cases. *supra* note 22. All of the cases involved aerial observation of contraband. The Sixth Circuit has stated that, "for Fourth Amendment purposes, there is a clear distinction between contraband and other property." *United States* v. *Bailey*, 628 F.2d 938, 944 (CA 6, 1980); *but see United States* v. *Taborda*, 635 F.2d 131, 138-139 n. 10 (CA 2, 1980). The Court has no quarrel with the holding of these cases that, as a general proposition of law, "a subjective desire to hide contraband from aerial surveillance is not sufficient to establish the requisite reasonable expectation of privacy." *People* v. *St. Amour*, 163 Cal.Rptr. at 191. As applied to the facts of this noncriminal case, however, that proposition cannot withstand constitutional scrutiny. Rather, this case fits within the holding that, "in order to be constitutionally protected from overflights, the person must show that the land in question is expected to be private according to the common habits of persons engaged in [business]." *Id*. Clearly, Dow has made such a showing.

legally and factually distinguishable. In *United States* v. *Allen*, 633 F.2d 1282, 1290 (CA 9, 1980), *cert denied*, ___ U.S. ___, 102 S.Ct. 133, 70 L.Ed.2d 112 (1981), the Court found that "the defendants did not have a reasonable expectation (of privacy)" due to the following factors:

> . . . The Allen Ranch is virtually on the United States sea-coast border . . . and Coast Guard helicopters routinely traversed the nearby air space for several reasons, including law enforcement. The residents of the Allen Ranch would, no doubt, have been aware of these routine flights and any reasonable person, cognizant of the ranch's proximity to the coastline and the Coast Guard's well-known function of sea-coast patrol and surveillance, could expect that government officers conducting such flights would be aided by sophisticated electronic equipment. As such, *the residents could not reasonably bear a subjective expectation of privacy from the Coast Guard's airborne telephotographic scrutiny*, particularly where, as here, the objects observed were large scale modifications of the Allen Ranch landscape and barn.

Id. (emphasis added). Further discussion of *Allen* is unnecessary. Likewise, *United States* v. *DeBacker*, 493 F.Supp. 1078 (WD Mich., 1980) is also distinguishable. There the Court found that, "defendant's relatively minor expectations of privacy do not outweigh the value to society in permitting such non-intrusive surveillance." *Id.* at 1081. Unlike this case, the aerial observation in *DeBacker* was unenhanced by visual aids such as a sophisticated camera. Also, the Court specifically noted that "airplane flights over local farm lands at low altitudes (200 feet) are not infrequent . . ." *Id.* The same cannot be said of flights over Dow's chemical manufacturing facility. *Accord, United States* v. *Mullinex*, 508 F.Supp. 512, 514-515 (ED Ky., 1980).

For these reasons, the Court finds that the "open fields" exception neither takes this case out of the purview of the Fourth Amendment, nor in any way alters this Court's earlier conclusion that EPA's conduct was unreasonable thereunder.

FIFTH AMENDMENT

[9] Dow has summarized its Fifth Amendment claim as follows: "that the surreptitious reconnaissance flights over Dow's Midland plant . . ., together with the photographs taken of the plant by EPA and its contractor constitute a taking of property [*i.e.* trade secrets and other proprietary information] without due process of law." (Dow Response Brief at 2). On various factual and jurisdictional grounds, EPA has moved for summary judgment on this claim.

In its Reply Brief EPA states that it does "not disagree with Dow's assessment that disputed issues of fact still remain with regard to the question of whether Dow in fact has any trade secrets and whether any such trade secrets are discernable in the aerial photographs obtained by EPA . . ." (EPA Reply Brief at 8). For this reason, the Court hereby DENIES EPA's motion for summary judgment on this claim. F.R. Civ.P.56(c)[26]

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[26] As the Court reads the complaint regarding the Fifth Amendment claim, the following material facts, as alleged by Dow, are still in dispute:

1) Dow has protectable trade secrets in its Midland plant and consequently, Dow has exercised the necessary reasonable degree of secrecy for the protection of such trade secrets.

2) The photographs taken by the EPA in its aerial surveillance of the Dow facility gave the EPA possession of valuable trade secrets of Dow.

3) Photographs taken by the EPA through aerial reconnaissance are available to the public and hence, will lead to a disclosure and loss of Dow trade secrets.

(*continued on following page*)

[10] Dow has raised 2 separate statutory sub-issues in this case: first, whether EPA is authorized under Section 114 of the Clean Air Act, 42 U.S.C. § 7414, to use aerial photography as an investigation tool; and second, whether EPA's sole and exclusive remedy when refused entry is to seek injunctive relief under Section 113 of the Clean Air Act, 42 U.S.C. § 7413. EPA's position is that Section 114 implictly authorizes it to use aerial photography. EPA also contends that the agency is not required to seek injunctive relief when entry is refused, and need only secure an *ex parte* warrant. The Court finds that only the former question — as to EPA's authority under Section 114 — is ripe for decision in this case.[27] Therefore the Court will leave the latter issue for another day.

A. *Use of Aerial Photography*

Section 114 of the Clean Air Act, 42 U.S.C. § 7414, governs the authority of EPA to enter and conduct

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(*continued from preceding page*)

The Court rejects EPA's claim that it lacks subject matter jurisdiction to issue the declaratory and injunctive relief sought by Dow. The Court is vested with such jurisdiction under 28 U.S.C. § 1331, 5 U.S.C. § 702, and 28 U.S.C. §§ 2201-2202. *See e.g. Public Service Co. of Indiana* v. *U.S.E.P.A.*, 509 F.Supp. 720, 721 (SD Ind., 1981).

[27] Under the facts of this case, an "actual controversy" regarding the Section 113 issue has not been presented within the meaning of the Declaratory Judgment Act, 28 U.S.C. § 2201. *See Lake Carriers Assoc.* v. *MacMullan*, 406 U.S. 498, 506, 92 S.Ct. 1749, 1755, 32 L.Ed.2d 257 (1972). Had EPA secured, or even attempted to secure, an *ex parte* warrant prior to the flyover, the issue would be justiciable. The agency, however, did neither. Coincidently, this very issue is about to be decided by the United States Court of Appeals for the Sixth Circuit in *United States* v. *Stauffer Chemical Co.*, no. 81-5311 (oral argument held December 17, 1981). The Appeal in *Stauffer Chemical* is from a District Court decision holding that the Clean Air Act authorizes EPA to use an *ex parte* warrant procedure when entry to inspect is refused. 511 F.Supp. 744, 749-750 (MD Tenn., 1981).

inspections of emissions sources. In relevant part, Section 114 provides:

> (a) For the purpose . . . (ii) of determining whether any person is in violation of any such standard or any requirement of such a plan, or (iii) carrying out any provision of this chapter
>
> (2) the Administrator or his authorized representative, upon presentation of his credentials —
>
> (A) shall have a right of entry to, upon or through any premises of such person or in which any records required to be maintained under paragraph (1) of this section are located, and
>
> (B) may at reasonable times have access to and copy any records, inspect any monitoring equipment or method required under paragraph (1) and sample any emissions which such person is required to sample under paragraph (1).

This statute *expressly* authorizes EPA to enter a facility to determine whether the applicable Clean Air Act requirements are being complied with, to have access to records and reports, to inspect any emissions monitoring equipment, and to sample emissions. The question before the Court in this case is what *implied* authority is granted to EPA under the statute.[28]

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[28] At the outset EPA maintains that its actions did not constitute an "entry." This Court agrees. The real issue, however, is not whether the aerial surveillance constituted an entry, but whether Section 114 authorizes EPA to use overflights as an investigatory tool.

EPA asserts that where Congress has delegated broad authority to an agency to implement a statute, such delegation carries with it the implicit authority for the agency to use all means and measures to effectuate the legislatively mandated end. *American Trucking Assoc.* v. *United States*, 344 U.S. 298, 308-313, 73 S.Ct. 307, 313-316, 97 L.Ed. 337 (1952). Dow responds that the legislative scheme established in the Clean Air Act is expressly and narrowly tapered to consist primarily of self-reporting and consented-to inspections.

As intimated previously, this Court believes that EPA should be granted broad authority to carry out its legislative mandate to enforce the federal pollution laws. Congress recognized this need when it amended the Clean Air Act in 1970:

> The purpose of the legislation . . . is to speed up, expand, and intensify the war against air pollution in the United States with a view to assuring that the air we breathe throughout the Nation is wholesome once again. The Air Quality Act of 1967 (Public Law 90-148) and its predecessor acts have been instrumental in starting us off in this direction. A review of achievements to date, however, make abundantly clear that the strategies which we have pursued in the war against air pollution have been inadequate in several important respects, and the methods employed in implementing those strategies often have been slow and less effective than they might have been.

H.R.Rep.No. 91-1146, 91st Cong. 2d Sess. 116, *reprinted* in [1970] U.S.Code Cong. & Ad.News 5356. Despite this recognition and statement of purpose, Congress did not amend the statute to authorize EPA to use "all means and measures" to monitor and enforce compliance with the Act.

Nothing in the plain language of the statute, or its sparse legislative history, suggests that Congress intended that EPA be given authority to utilize aerial surveillance and photography. In fact, 3 literal aspects of Section 114 reveal a legislative will that EPA's investigatory powers be limited to land-based examination of emission sources.

Section 114(a)(2)(A) grants to EPA, or its "authorized representative":[29]

— a right of entry;
— to, upon, or through any premises;
— upon presentation of credentials.

An analysis of each of these phrases compels the conclusion that aerial surveillance and photography by EPA is not authorized under the statute, even by reasonable implication.

A "right of entry" cannot be viewed as synonomous with a "right to search." Had Congress intended that EPA be allowed to use aerial search techniques, it could have considered granting the agency a broad "right to search," or could have specifically enumerated aerial surveillance as among the permissible methods of monitoring and inspection. But a "right of entry," in literal terms, is something quite different. The noun "entry" denotes the physical act of admission or ingress into a given area. The fact that Congress used the phrase "right of entry," suggests to this Court a common sense

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[29] No issue has been raised in this case as to whether Abrams was EPA's "authorized representative." *See e.g. Bunker Hill* v. *U.S.E.P.A*, 658 F.2d 1280 (CA 9, 1981); *Stauffer Chemical Co.* v. *E.P.A.*, 647 F.2d 1075 (CA 10, 1981); *United States* v. *Stauffer Chemical Co.*, 511 F.Supp. 744 (MD Tenn., 1981); appeal docketed no. 81-5311 (CA 6, May 4, 1981); *Public Service Co. of Indiana* v. *U.S.E.P.A.*, 509 F.Supp. 720 (SD Ind., 1981).

interpretation, leading to the conclusion that EPA's intended inspection authority is land-based.

The phrase "to, upon or through any premises," further defines the nature of EPA's statutory right of entry. In conjunction with the term "entry," the adverbs "to, upon, or through" more logically reveal that Congress had in mind an earthbound inspection scheme for EPA, rather than one from above looking down.

Finally, it would be paradoxical for this Court to find an implied right to use *surreptitious* overflights, in a statute expressly requiring the "presentation of . . . credentials" by the inspecting EPA official. The Court is not prepared to ratify a procedure whereby an EPA official appears at the gate of a facility, presents his credentials, and then directs the inspected party's attention to the aircraft flying overhead. Again, this clear legislative expression supports the conclusion that EPA exceeded its statutory authority under Section 114 in carrying out the flyover and aerial photography of Dow's plant.

EPA relies on 2 recent cases, *In Re Clean Air Act Inspection of Bunker Hill*, 15 ERC 1063 (D Idaho, 1980), *affirmed sub. nom, Bunker Hill Co.* v. *U.S.E.P.A.*, 658 F.2d 1280 (CA 9, 1981) and *Public Service Co. of Indiana Inc.* v. *U.S.E.P.A.*, 509 F.Supp. 720 (SD Ind., 1981), for the proposition that "EPA's implicit authority to take photographs of a facility . . . necessarily arises out of its explicit authority in Section 114 of the Act" (EPA Brief at 32-33). EPA's position, and the authority on which it relies, are sound. Section 114 can and should be read as impliedly authorizing the use of photography of a facility which is the subject of an *on-site* inspection. Neither Section 114, nor the cases cited, however, impliedly authorize surreptitious *aerial* photography.

Both the *Bunker Hill* and *Public Service Company* case involved the taking of photographs during on-site, land-based inspections by EPA. In separate conclusions of law the Court in *Bunker Hill* held that:

> 10. The Environmental Protection Agency has authority under Section 114 of the Clean Air Act to take photographs of the facilities and equipment it inspects.
>
> 11. The Bunker Hill Company cannot require the Environmental Protection Agency or its private contractors duly authorized as representatives of the EPA Administrator to submit film to Bunker Hill for development and screening for possible confidentiality concerns. The Bunker Hill Company may, however, claim that any or all of the information depicted in photographs taken by EPA during a Section 114 inspection is confidential, and secure to such photographs the protections provided by 40 CFR 2.201 et seq.

15 ERC at 1066. Similarly, in *Public Service Company*, a decision limited to its own facts, the Court held that EPA's taking of photographs to pinpoint and cite violations was "not improper." 509 F.Supp. at 726. This Court agrees with these holdings, but finds that they are not dispositive of the issue in this case.

Aerial surveillance and photography is not authorized, either expressly or impliedly, by Section 114 of the Clean Air Act. To find otherwise would be to undermine the apparent Congressional purpose that only land-based inspections be utilized, to negate the specific requirement that EPA inspectors present their credentials at the time of the inspection, and to circumvent the inspected parties' right to state claims of confidentiality. 42 U.S.C. § 7414(c); 40 CFR 2.201 et seq.

V.
CONCLUSION

In summary, the Court concludes that the EPA flyover and aerial photography of Dow's plant consitituted an unreasonable search in violation of the Fourth Amendment. In addition, the Court finds that EPA exceeded its statutory authority under Section 114 of the Clean Air Act, 42 U.S.C. § 7414, in using this method of inspection.

Accordingly, the Court hereby GRANTS Dow's motion for partial summary judgment and DENIES EPA's cross-motion for summary judgment. On this basis;

IT IS HEREBY ORDERED AND ADJUDGED that EPA is permanently enjoined and restrained from conducting future aerial surveillance and photography of the Dow Chemical manufacturing facility in Midland, Michigan.

IT IS SO ORDERED.

APPENDIX C

EXCERPTS FROM RESTATEMENT OF TORTS § 757 (1939)

RESTATEMENT OF TORTS

* * *

§ 757. LIABILITY FOR DISCLOSURE OR USE OF ANOTHER'S TRADE SECRET — GENERAL PRINCIPLE.

One who discloses or uses another's trade secret, without a privilege to do so, is liable to the other if

(a) he discovered the secret by improper means, or

(b) his disclosure or use constitutes a breach of confidence reposed in him by the other in disclosing the secret to him, or

(c) he learned the secret from a third person with notice of the facts that it was a secret and that the third person discovered it by improper means or that the third person's disclosure of it was otherwise a breach of his duty to the other, or

(d) he learned the secret with notice of the facts that it was a secret and that its disclosure was made to him by mistake.

Comment:

* * *

b. Definition of trade secret. A trade secret may consist of any formula, pattern, device or compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over com-

petitors who do not know or use it. It may be a formula for a chemical compound, a process of manufacturing, treating or preserving materials, a pattern for a machine or other device, or a list of customers. It differs from other secret information in a business (see § 759) in that it is not simply information as to single or ephemeral events in the conduct of the business, as, for example, the amount or other terms of a secret bid for a contract or the salary of certain employees, or the security investments made or contemplated, or the date fixed for the announcement of a new policy or for bringing out a new model or the like. A trade secret is a process or device for continuous use in the operation of the business. Generally it relates to the production of goods, as, for example, a machine or formula for the production of an article. It may, however, relate to the sale of goods or to other operations in the business, such as a code for determining discounts, rebates or other concessions in a price list or catalogue, or a list of specialized customers, or a method of bookkeeping or other office management.

* * *

APPENDIX D

EXCERPTS FROM UNIFORM TRADE SECRETS ACT

UNIFORM TRADE SECRETS ACT

* * *

§ 1. [Definitions]

As used in this Act, unless the context requires otherwise:

(1) "Improper means" includes theft, bribery, misrepresentation, breach or inducement of a breach of a duty to maintain secrecy, or espionage through electronic or other means;

(2) "Misappropriation" means:

(i) acquisition of a trade secret of another by a person who knows or has reason to know that the trade secret was acquired by improper means; or

(ii) disclosure or use of a trade secret of another without express or implied consent by a person who

(A) used improper means to acquire knowledge of the trade secret; or

(B) at the time of disclosure or use, knew or had reason to know that his knowledge of the trade secret was

(I) derived from or through a person who had utilized improper means to acquire it;

(II) acquired under circumstances giving rise to a duty to maintain its secrecy or limit its use; or

(III) derived from or through a person who owed a duty to the person seeking relief to maintain its secrecy or limit its use; or

(C) before a material change of his position, knew or had reason to know that it was a trade secret and that knowledge of it had been acquired by accident or mistake.

(3) "Person" means a natural person, corporation, business trust, estate, partnership, association, joint venture, government, governmental subdivision or agency, or any other legal or commercial entity.

(4) "Trade secret" means information, including a formula, pattern, compilation, program, device, method, technique, or process, that:

(i) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and

(ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

* * *

§ 2. *[Injunctive Relief]*

(a) Actual or threatened misappropriation may be enjoined. Upon application to the court, an injunction shall be terminated when the trade secret has ceased to exist, but the injunction may be continued for an additional reasonable period of time in order to eliminate commercial advantage that otherwise would be derived from the misappropriation.

(b) If the court determines that it would be unreasonable to prohibit future use, an injunction may condition future use upon payment of a reasonable royalty for no longer than the period of time the use could have been prohibited.

(c) In appropriate circumstances, affirmative acts to protect a trade secret may be compelled by court order.

* * *

§ 3. *[Damages]*

(a) In addition to or in lieu of injunctive relief, a complainant may recover damages for the actual loss caused by misappropriation. A complainant also may recover for the unjust enrichment caused by misappropriation that is not taken into account in computing damages for actual loss.

(b) If willful and malicious misappropriation exists, the court may award exemplary damages in an amount not exceeding twice any award made under subsection (a).

* * *

§ 4. *[Attorney's Fees]*

If (i) a claim of misappropriation is made in bad faith, (ii) a motion to terminate an injunction is made or resisted in bad faith, or (iii) willful and malicious misappropriation exists, the court may award reasonable attorney's fees to the prevailing party.

* * *

§ 5. [Preservation of Secrecy]

In an action under this Act, a court shall preserve the secrecy of an alleged trade secret by reasonable means, which may include granting protective orders in connection with discovery proceedings, holding in-camera hearings, sealing the records of the action, and ordering any person involved in the litigation not to disclose an alleged trade secret without prior court approval.

* * *

§ 6. [Statute of Limitations]

An action for misappropriation must be brought within 3 years after the misappropriation is discovered or by the exercise of reasonable diligence should have been discovered. For the purposes of this section, a continuing misappropriation constitutes a single claim.

* * *

§ 7. [Effect on Other Law]

(a) This Act displaces conflicting tort, restitutionary, and other law of this State pertaining to civil liability for misappropriation of a trade secret.

(b) This Act does not affect:

(1) contractual or other civil liability or relief that is not based upon misappropriation of a trade secret; or

(2) criminal liability for misappropriation of a trade secret.

* * *

§ 8. [Uniformity of Application and Construction]

This Act shall be applied and construed to effectuate its general purpose to make uniform the law with respect to the subject of this Act among states enacting it.

* * *

§ 9. [Short Title]

This Act may be cited as the Uniform Trade Secrets Act.

§ 10. [Severability]

If any provision of this Act or its application to any person or circumstances is held invalid, the invalidity does not affect other provisions or applications of the Act which can be given effect without the invalid provision or application, and to this end the provisions of this Act are severable.

* * *

§ 11. [Time of Taking Effect]

This Act takes effect on ____, and does not apply to misappropriation occurring prior to the effective date.

§ 12. [Repeal]

The following Acts and parts of Acts are repealed:

(1)
(2)
(3)

* * *

Historical Note

The Uniform Trade Secrets Act was approved by the National Conference of Commissioners on Uniform State Laws in 1979.

* * *

TABLE OF JURISDICTIONS WHEREIN ACT HAS BEEN ADOPTED

Jurisdiction	Laws	Effective Date	Statutory Citation
Connecticut	1983, No. 344	6-23-1983*	
Delaware	1982 [63 Del. Laws], c. 218	4-15-1982	6 Del.C. §§ 2001 to 2009.
Indiana	1982, No. 1257	2-25-1982*	West's A.I.C. 24-2-3-1 to 24-2-3-8.
Kansas	1981, c. 214	7-1-1981	K.S.A. 60-3320 to 60-3330.
Louisiana	1981, No. 482	7-19-1981*	LSA-R.S. 51:1431 to 51:1439.
Minnesota	1980, ch. 594	1-1-1981	M.S.A. §§ 325C.01 to 325C.08.
Washington	1981, c. 286	1-1-1982	West's RCWA 19.108.010 to 19.108.940.

* Date of approval.

* * *

APPENDIX E

RELEVANT MICHIGAN COMPILED LAWS

* * *

M.C.L. § 750.539a and 750.539d

750.539a Definitions

Sec. 539a. As used in sections 539a to 539i:

(1) "Private place" means a place where one may reasonably expect to be safe from casual or hostile intrusion or surveillance but does not include a place to which the public or substantial group of the public has access.

(2) "Eavesdrop" or "eavesdropping" means to overhear, record, amplify or transmit any part of the private discourse of others without the permission of all persons engaged in the discourse. Neither this definition or any other provision of this act shall modify or affect any law or regulation concerning interception, divulgence or recording of messages transmitted by communications common carriers.

(3) "Surveillance" means to secretly observe the activities of another person for the purpose of spying upon and invading the privacy of the person observed.

(4) "Person" means any individual, partnership, corporation or association. P.A.1931, No. 328, § 539a, added by P.A.1966, No. 319, § 1, Eff. March 10, 1967.

* * *

750.539d Installation of device for observing, photographing or eavesdropping in private place

Sec. 539d. Any person who installs in any private place, without the consent of the person or persons entitled to privacy there, any device for observing, photographing, or eavesdropping upon the sounds or events in such place, or uses any such unauthorized installation, is guilty of a felony punishable by imprisonment in a state prison for not more than 2 years or by a fine of not more than $2,000.00, or both. P.A.1931, No. 328, § 539d, added by P.A.1966, No. 319, § 1, Eff. March 10, 1967.

* * *

M.C.L. § 752.771 AND M.C.L. § 752.772

TRADE SECRETS — STEALING, EMBEZZLING OR COPYING

752.771. Definitions

Sec. 1. As used in this act:

(1) "Article" means any object, material, device or substance or copy thereof, including any writing, record, recording, drawing, sample, specimen, prototype model, photograph, microorganism, blueprint or map.

(2) "Representing" means describing, depicting, containing, constituting, reflecting or recording.

(3) "Trade secret" means the whole or any portion or phase of any scientific technical information, design, process, procedure, formula or improvement which is secret and of value; and a trade secret is considered to be secret when the owner thereof takes measures to prevent it from becoming available to persons other than those selected by the owner to have access thereto for limited purposes.

(4) "Copy" means any facsimile, replica, photograph or other reproduction of an article, and any note, drawing or sketch made of or from an article.

P.A.1968, No. 329, § 1, Eff. Nov. 15.

* * *

752.772. Depriving, withholding, etc., trade secrets; penalty, misdemeanor

Sec. 2. Any person who, with intent to deprive or withhold from the owner thereof the control of a trade secret, or with an intent to appropriate a trade secret to his own use or to the use of another, steals or embezzles an article representing a trade secret or without authority makes or causes to be made a copy of an article representing a trade secret, is guilty of a misdemeanor and shall be fined not more than $1,000.00 or imprisoned for not more than 1 year, or both.

P.A.1968, No. 329, § 2, Eff. Nov. 15.

* * *

APPENDIX F

EXCERPT FROM DEPOSITION OF J. WAIT (DOW), 5/10/78, PAGES 13-14

* * *

(13) * * * Q. Now, are you aware, sir, of any measures that could be taken to prevent aerial photography of the chloralkali plant in Midland?

A. As it stands today I'm not aware.

Q. Can you envisage anything that could be done to prevent aerial photography of the facilities?

A. I suppose it would be possible to build a roof over such a plant.

Q. How large is the plant?

A. It covers 30 acres.

Q. From your standpoint as an engineer would that be a practical alternative?

A. Absolutely not practical.

Q. Have you any idea what the cost would be to roof the chloralkali plant in Midland?

A. It would be extremely difficult to estimate the cost but I would think that you could not do it for less than $15,000,000.

Q. Would there be anything required other than a — other than the (14) erection of a roof over the facilities?

A. Well, the roof alone would introduce a lot of problems. There would be a lot of side effects from such a thing. But the roof alone would probably tend to hide the biggest part of the operation.

Q. To maintain the operation of the chloralkali facility would you have to expend any sums of money for items other than the roof itself?

A. Yes, the maintenance would become far more difficult. For example, today we use giant mobile cranes to move equipment from one place to another during

routine maintenance. These cranes, some of them are as high as 100 or 125 feet. Obviously a roof would not be practical that high so large bridge cranes would have to be installed permanently within the roof which would be extremely expensive. The capacities of some of these things would run into the range of a hundred thousand pounds lift capability so it would be an extemely difficult arrangement.

* * *

APPENDIX G

NON-FULLY OWNED SUBSIDIARIES AND AFFILIATES OF THE DOW CHEMICAL COMPANY AS OF DECEMBER 31, 1984

Subsidiaries and affiliates owned both directly and indirectly have been included. The company italicized is the direct owner of the companies listed below it. "Dow's" percent ownership is indicated by each company.

SUBSIDIARIES

The Dow Chemical Company

Alamo Land Company, Inc. (56%)
Gruppo Lepetit S.p.A. (99%)
L.I.F.E. (Laboratorios Industriales Farmaceuticos Ecuatorianos) (59%)
    Laboratorios L.I.F.E. del Salvador S.A. (100%)
    Negocios e Industrias S.A. "Neisa" (100%)
Pacific Chemical Berhad (51%)
    Pacific Cable Products Sendirian Berhad (51%)
Ivon Watkins-Dow Ltd (51%)
Société Industrielle de Plastic et de L'acier S.A. (99%)
The Cynara Company (90%)

Dow Chemical A.G.
(A.G. owned 100% by The Dow Chemical Company)

Petroquimica Dow S.A. (70%)

AFFILIATES

The Dow Chemical Company

Dow Corning Corporation (50%)
Dowell Schlumberger Corporation (50%)

Dowell Schlumberger Incorporated (50%)
Compagnie des Services Dowell Schlumberger (50%)
El Dorado Terminals Company (50%)
Agro Quimica Maringa S.A. (20%)
Bank Mendes Gans (29%)
Chemi-Trol Chemical Company (23%)
DOKI (49%)
Estireno del Zulia C.A. (25%)
Ibafon Chemical Ltd (40%)
Oasis Pipeline Company (30%)
Package Machinery Company (29%)
Piramides Brazil (22%)
Total Raffinaderij Nederland N.V. (20%)
Zoo Agro de Venezuela C.A. (49%)
Al Miyah Chemicals (Ltd.) (49%)
Baratek (50%)
Boersele Hydrocracker B.V. (45%)
Insul/Crete Company, Inc. (50%)
Joliet Marine Terminal (50%)
Long Beach Marine Terminal (50%)
Metal Mark Inc. (50%)
Oronzio De Nora Impianti Elettrochimici S.A. (50%)
Sinor Corradini Navarra S.A. (50%)
Technovest Inc. (20%)
Bio-Ciencia/Lavosier Analysis Clinicas (40%)

Dow Chemical A.G. (A.G. is
owned 100% by The Dow Chemical Company)

Polychem Ltd (25%)

Coral Navigation (Coral is
owned 100% by The Dow Chemical Company)

Chief Shipping Company (50%)

Dow Chemical Company Ltd
(Ltd is 100% owned by Dow Chemical A.G.)

Cromarty Petroleum Company Ltd (50%)

Dow Chemical of Canada Ltd (Canada Ltd is
100% owned by The Dow Chemical Company)

Dowell Schlumberger Canada Inc. (50%)
Fort Saskatchewan Ethylene Storage Limited (50%)
Lawrason's Chemical, Ltd (20%)
Wabiskaw Explorations Limited (50%)

Maligne Resources Limited (Maligne is
100% owned by Dow Chemical of Canada Ltd)

MT Partnership (50%)

Dow Chemical Africa (Pty) Limited (Africa is
100% owned by Dow Chemical A.G.)

JV Chemicals (50%)

Dow Chemical International Energy Company (Energy is
100% owned by The Dow Chemical Company)

Canmar International Drilling Co. (50%)

Dow Chemical S.p.A. (S.p.A. is
100% owned by Dow Chemical A.G.)

Corradini Poliuretani S.p.A. (50%)

Dow Chemical Iberica S.A. (Iberica is
100% owned by Dow Chemical A.G.)

Transformadora De Etileno (50%)

Dow Quimica S.A. (Quimica is
100% owned by The Dow Chemical Company)

Estireno Do Nordeste (33%)
Expansao Correctora De Seguros Ltda (33%)

Merrell Dow Franca S.A. (Merrell Dow Franca is 100% owned by Merrell Dow Pharmaceuticals Inc.)

Biotic Algérie, S.A. (49%)
Biotic Maroc (49%)

Dofinco, Inc. (Dofinco is 100% owned by The Dow Chemical Company)

DCS Capital Partnership (33%)
DCS Capital Corporation (100%)

Dow Financial Services Corporation (Financial Services is owned 100% by The Dow Chemical Company)

Dow Banking Corporation (78%)
Dow Scandia Holdings Limited (52%)
Dow MBF Limited (54%)
MBF Leasing Hong Kong (26%)
MBF Leasing Kuala Lumpur (29%)
MBF Leasing Singapore (49%)

(3)

No. 84-1259

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FILED
MAY 21 1985
ALEXANDER L. STEVAS,
CLERK

In the Supreme Court of the United States

OCTOBER TERM, 1984

THE DOW CHEMICAL COMPANY, PETITIONER

v.

UNITED STATES OF AMERICA

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

BRIEF FOR THE UNITED STATES IN OPPOSITION

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12pp

QUESTIONS PRESENTED

1. Whether the Environmental Protection Agency (EPA) violated the Fourth Amendment by contracting with a private company to take aerial photographs of a chemical plant from navigable airspace with standard aerial camera equipment.

2. Whether the procurement of aerial photographs of chemical plants by EPA exceeds its statutory authority.

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In the Supreme Court of the United States

OCTOBER TERM, 1984

No. 84-1259

THE DOW CHEMICAL COMPANY, PETITIONER

v.

UNITED STATES OF AMERICA

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

BRIEF FOR THE UNITED STATES IN OPPOSITION

OPINIONS BELOW

The opinion of the district court (Pet. App. B1-B2) is reported at 536 F. Supp. 1355. The opinion of the court of appeals (Pet. App. A1-A14) is reported at 749 F.2d 307.

JURISDICTION

The judgment of the court of appeals was entered on November 9, 1984. The petition for a writ of certiorari was filed on February 7, 1985. The jurisdiction of this Court is invoked under 28 U.S.C. 1254(1).

STATEMENT

Petitioner owns and operates a large manufacturing facility in Midland, Michigan, which occupies approximately 2,000 acres in an area that is characterized by light to medium development. Petitioner's facility is also located near an airport, and commercial aircraft frequently pass over and near the property. At the Midland location, petitioner owns and operates two power plants. In late 1977 and

early 1978, enforcement officials of the Environmental Protection Agency (EPA) were gathering information concerning these power plants with the intention of bringing an enforcement action under the Clean Air Act, 42 U.S.C. 7401 *et seq.* Pet. App. A2.

In early 1978, EPA enforcement officials decided to obtain aerial photographs of petitioner's Midland power plants. They contacted EPA's Environmental Monitoring and Surveillance Laboratory (EMSL) in Las Vegas, Nevada, and ordered the photographs. EMSL, in turn, contracted with Abrams Aerial Survey Corporation (Abrams), a Midland aerial photography business, to take photographs of the Dow plant. On February 7, 1978, an Abrams employee flew over petitioner's facility and took photographs. These photographs were taken when the airplane was flying at altitudes of 12,000, 3,000, and 1,200 feet. The camera used was a Wild RC-10 aerial mapping camera with a six-inch lens and a focal length of 150 millimeters. The photographs taken at 1,200 feet show the plant at a scale of 1 inch equals 20 feet. Abrams sent the undeveloped film to EMSL by courier service. There, EPA technicians developed the film and made several prints and enlargements of the power plants. The film and enlargements were then sent to EPA's Region V enforcement office in Chicago, Illinois. Pet. App. A2-A3.

2. On March 15, 1978, petitioner brought an action for injunctive and declaratory relief against the United States and EPA. It alleged that aerial photography of its Midland plant violated its Fourth Amendment rights and deprived it of trade secret property interests in violation of the Fifth Amendment. Petitioner sought to obtain the photographs and to enjoin EPA's future use of aerial photography of the Midland plant.

On April 19, 1982, the district court granted petitioner's motion for partial summary judgment and ruled that the aerial photography violated petitioner's Fourth Amendment rights.[1] First, the court ruled that the aerial photography was an unlawful warrantless administrative search since EPA admittedly was engaged in a "quest for evidence" (Pet. App. B6). *Id.* at B5-B17. In the alternative, the district court analyzed the case under *Katz* v. *United States*, 389 U.S. 347 (1967), to determine whether petitioner had a reasonable expectation of privacy upon which EPA had infringed. It found that because petitioner had designed its plant so that some outdoor portions of the facility were in the interior, *i.e.*, not visible on the ground from the plant boundary, it had an expectation of privacy in the exterior features of those facilities located in the inner areas of its plant. The court also found that the aerial photography was visually enhanced surveillance because "EPA could later analyze [the photographs] under enlarged and magnified conditions" (Pet. App. B27). *Id.* at B17-B32. Finally, the court ruled that the "open fields" doctrine did not apply when a property owner's expectation of privacy was objectively reasonable. In this regard, the district court relied on the panel decision in *United States* v. *Oliver*, 657 F.2d 85 (6th Cir. 1981), which was subsequently reheard en banc and reversed, 686 F.2d 356 (1982), aff'd, *Oliver* v. *United States*, No. 82-15 (Apr. 17, 1984). Pet. App. B32-B38.

The district court also ruled that Section 114 of the Clean Air Act, 42 U.S.C. 7414, which grants EPA inspectors the "right of entry to, upon or through any premises" in certain circumstances impliedly excluded EPA from using other techniques, such as aerial surveillance or photography, as an investigative tool. The court ruled that Congress

---

[1]Petitioner's claims under the Fifth Amendment were later dismissed without prejudice by a stipulation of the parties.

intended that "only land based inspections be utilized" (Pet. App. B44). Hence, it held that the overflights exceeded EPA's statutory authority. *Id.* at B39-B44.

3. The court of appeals reversed (Pet. App. A1-A14). Looking to whether petitioner had a reasonable expectation of privacy in the areas in question, the court concluded that no reasonable expectation of privacy was invaded in photographing from the air the "outdoor spaces of a chemical plant" (*id.* at A13). The court reasoned that petitioner had exhibited no actual expectation of privacy from aerial observation of its large industrial plant (*id.* at A7-A8). Even if it had such an expectation, moreover, the court explained that society would not deem it to be reasonable (*id.* at A9):

> When the entity observed is a multi-building complex, and the area observed is the outside of these buildings and the spaces in between the buildings, and when the complex is near an airport and within the pattern of planes landing and taking off, it is difficult to see how a reasonable person would have privacy expectations in the outside of the buildings and the spaces between the buildings.

Finally, the court of appeals reversed the district court's ruling that the flights were unlawful because EPA was not authorized by statute to use aerial photography as an investigative technique. It ruled that Congress's delegation under the Clean Air Act of general investigative authority to EPA was sufficient statutory authority to conduct aerial observation that satisfied the Fourth Amendment. *Id.* at A13-A14.

ARGUMENT

The decision of the court of appeals is correct and does not conflict with any decision of this Court or of any other court of appeals. Accordingly, it does not warrant review by this Court.

1.a. Petitioner contends (Pet. 11-14) that its expectation of privacy in its entire 2,000-acre Midland plant is indistinguishable from that of the interior portion of a commercial building or office and that an aerial "search" of any part of these premises therefore presumptively required a warrant. It is undeniable, however, that the outdoor features of petitioner's facility for which it claims a reasonable expectation of privacy are continuously exposed to the open sky. Overflights of the facility are a frequent occurrence, and Congress has declared "a public right of freedom of transit through navigable airspace," 49 U.S.C. App. 1304. Thus, as a practical matter, it is manifest that petitioner could not expect privacy in these areas, at least with respect to aerial observation, comparable to that in its offices.

As this Court noted in *Oliver* v. *United States*, No. 82-15 (Apr. 17, 1984), slip op. 4, there is ordinarily no bar to aerial surveillance of lands by the general public and, by the same token, the Fourth Amendment does not prevent aerial observation by the police. See also *United States* v. *Allen*, 675 F.2d 1373 (9th Cir. 1980), cert. denied, 454 U.S. 833 (1981); *United States* v. *DeBacker*, 493 F. Supp. 1078 (W.D. Mich. 1980).[2] This is equally true when the observation is of areas that constitute the "curtilage" of a private building, which may be endowed with an expectation of freedom from physical intrusions. The courts have consistently found that viewing the curtilage from the air, nearby open fields, or public property, even with enhancing visual aids, does not violate the Fourth Amendment. See, *e.g.*, *United States* v. *Hensel*, 699 F.2d 18, 41 (1st Cir.), cert. denied, 461 U.S. 958 (1983); *United States* v. *Lace*, 669

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[2]Indeed, even the dissent from the en banc court of appeals' decision in *Oliver* premised its conclusion (that the entry onto private property in that case violated the Fourth Amendment) partly on the assumption that the less intrusive technique of aerial surveillance would have been valid. See 686 F.2d at 372 (Keith, J., dissenting).

F.2d 46, 49-51 (2d Cir.), cert. denied, 459 U.S. 854 (1982); *United States* v. *Minton*, 488 F.2d 37, 58 (4th Cir. 1973), cert. denied, 416 U.S. 936 (1974).[3] Thus, there is no basis for contending that viewing petitioner's plant from the air violated the Fourth Amendment.

b. Petitioner also contends (Pet. 10-11, 13) that the detail that the photographs taken for EPA were capable of revealing independently gives rise to a Fourth Amendment violation, claiming that the camera used was "sophisticated photographic equipment * * * comparable to" a wiretap (Pet. 13). This contention is without merit. Even assuming arguendo that the use of unusually sophisticated or not commercially available equipment could involve an unconstitutional privacy intrusion, there is no basis for questioning the decision below. The aerial camera used by the private contractor in this case was standard equipment available to, and used by, the public for aerial photographic purposes.[4] Aerial photography itself is generally a lawful commercial service openly conducted by private firms similar to the one EPA engaged in this case, and there was nothing extraordinary about the photographs taken in this particular case. Certainly there is no reason to think that the aerial photographs in this case were any more detailed than those routinely taken all across the country by government agencies for mapping purposes. Petitioner simply advances no reason why the enhancement of the naked eye through

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[3]The cases cited by petitioner (Pet. 13) as invalidating the use of visual aids, such as a telescope, involve viewing the inside of a dwelling. See *United States* v. *Taborda*, 635 F.2d 131, 139 (2d Cir. 1980); *United States* v. *Kim*, 415 F. Supp. 1252 (D. Hawaii 1976). Even assuming that these cases are correctly decided, they are plainly distinguishable from this one. See *United States* v. *Hensel*, 699 F.2d at 41; *United States* v. *Lace*, 669 F.2d at 51.

[4]Indeed, one of the government's expert witnesses stated that photographs showing greater detail than those taken here could be taken from a helicopter with a good quality 35 millimeter camera and a standard 70 millimeter lens. C.A. App. 310-311.

the use of standard camera equipment violates the Fourth Amendment.

In any event, petitioner throughout this litigation has focused on a different case — what details the aerial photographs were capable of revealing under magnification or enlargement -- rather than what the photographs as processed and printed by the government actually revealed. As stated at the outset, the government prepared and enlarged photographs involving the two large Midland power plants. But petitioner does not claim an expectation of privacy in the exterior of the power plants; rather, it focuses on other portions of the facility also captured in the photographs. See Pet. 11-12. The developed films in EPA's possession showed the remainder of the Midland facility at a scale of one inch equals 20 feet in photographs taken at an altitude of 1,200 feet. While these films could have been enlarged or viewed under magnification to show greater detail of petitioner's plant, EPA did not do so, and the government certainly cannot be accused of ferreting out the "minute details" of petitioner's facility by such techniques. The question whether the use of certain technology violates the Fourth Amendment depends upon the intrusion on privacy actually experienced in an individual case rather than upon the potential intrusion that the technology may be capable of producing. Compare *United States* v. *Knotts*, 460 U.S. 276 (1983) (use of beeper to track location of automobile on highway), with *United States* v. *Karo*, No. 83-850 (July 3, 1984) (monitoring of beeper in a private residence).

2. Petitioner also renews its contention (Pet. 14-16) that EPA lacks statutory authority to investigate and obtain evidence through the use of aerial photography. This contention is completely without merit.

Petitioner's argument is that Section 114(a)(2) of the Clean Air Act, 42 U.S.C. 7414(a)(2), which authorizes entry by EPA inspectors "to, upon or through any premises

* * *," impliedly forbids aerial inspection or photography. Petitioner thus attempts to convert a positive congressional grant of authority to enter premises at ground level into a prohibition on aerial inspection, which is undisputedly a substantially lesser intrusion. Clearly, there is no such negative implication in this broad grant of authority. To the contrary, when Section 114 was enacted in 1970, the intent was to expand federal officers' powers to investigate air pollution, not to restrict their powers. See 2 Congressional Research Service, *A Legislative History of the Clean Air Act Amendments of 1970, for the Senate Comm. on Public Works*, 93d Cong., 2d Sess. 829 (Comm. Print 1974) (remarks of Rep. Murphy). The public is allowed to take aerial photographs (and, in fact, the photographs here were taken by a private company), and nothing in the Clean Air Act prevents EPA from using the same technique in discharging its duties.[5]

CONCLUSION

The petition for a writ of certiorari should be denied.

Respectfully submitted.

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MAY 1985

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[5]Petitioner also raises an unfocused claim (Pet. 16-17) that the decision below somehow threatens a company's trade secrets. Whether or not it is required to do so by 42 U.S.C. 7414(c), EPA has adopted a policy of notifying companies of overflights, and the provisions of 5 U.S.C. 552(b)(4) and 18 U.S.C. 1905 apply to any trade secrets that may be established by the companies. Certainly there can be no claim here that EPA's own use of the photographs of the power plants invades any trade secrets of petitioner.

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No. 84-1259

In The

Supreme Court of the United States

October Term, 1984

THE DOW CHEMICAL CO.,

Petitioner,

v.

UNITED STATES OF AMERICA BY AND THROUGH ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

ON PETITION FOR CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

BRIEF AMICI CURIAE OF MOUNTAIN STATES LEGAL FOUNDATION AND CHAMBER OF COMMERCE OF THE UNITED STATES

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BRIEF AMICI CURIAE OF MOUNTAIN STATES LEGAL FOUNDATION AND CHAMBER OF COMMERCE OF THE UNITED STATES

With the written consent of all parties, the Mountain States Legal Foundation (MSLF or Foundation) and the Chamber of Commerce of the United States (Chamber) respectfully submit this brief as amici curiae on behalf of their members. Amici have filed the consents of the parties with the Clerk of the Court.

INTEREST OF AMICI CURIAE

MSLF is a nonprofit, membership, public interest law foundation dedicated to bringing before the courts those issues vital to the defense and preservation of individual

liberties, private property rights, and the free enterprise system. The Foundation seeks to protect the liberty and property rights of its individual and corporate members, including their rights of privacy in the protection of their commercial interests.

The Chamber of Commerce of the United States is the largest association of business and professional organizations in the United States. Chamber membership exceeds 184,000 business firms and individuals, including more than 180,000 corporations, partnerships, and proprietorships, more than 3,900 trade associations, and state and local chambers of commerce. The Chamber regularly represents the interests of its members in the litigation of issues of national concern to the American business community.

The issue before this Court is whether the Environmental Protection Agency (EPA) violates the Fourth Amendment rights of the nation's manufacturing concerns when it conducts warrantless overflights of the open air but enclosed plant sites using special aerial cameras that expose manufacturing processes otherwise protected as trade secrets. The nature of the chemical manufacturing industry requires that key parts of the facility be unroofed for reasons of safety, cost, and practicality. It is essential to the financial success of Foundation and Chamber members' businesses that they be able to protect trade secrets and realize their expectations of privacy within the perimeter of their manufacturing plants. So long as overflights are warrantless, the companies have no way of knowing that photographs have been taken, and if so, whether the photographs require trade secret designation to prevent their dissemination.

SUMMARY OF REASONS FOR GRANTING THE WRIT

The United States Court of Appeals for the Sixth Circuit held that Dow Chemical Co. (Dow) has no privacy rights under the Fourth Amendment to prevent the taking of aerial photographs of the enclosed but open air parts of the Midland plant. The Court of Appeals reasoned that society did not recognize a right of privacy, since the interior parts of the plant could be seen from the air, like open fields. [Petitioner's Appendix A, p. A-9.]

The court's conclusion conflicts with long established expectations of privacy that protect valuable trade secrets from intrusion. If a competitor of Dow had done what EPA did, there is no question that Dow could have sued the competitor for violation of its valuable trade secrets.

The Sixth Circuit held that the curtilage doctrine did not apply to commercial areas, especially those so large as the areas occupied by Dow's outdoor manufacturing processes. [Petitioner's Appendix A, p. A-11.] This holding conflicts with decisions in the Courts of Appeals for the Seventh and Ninth Circuits. The Sixth Circuit also misapplies this Court's holding in *Oliver v. United States,* 104 S. Ct. 1735 (1984) by extending the open fields doctrine to open air manufacturing processes that are an integral part of the plant's structures. The court's decision also makes no sense. If the Fourth Amendment protects the buildings to which the integral manufacturing components are attached, it is illogical to deny the pipes, wires, and smoke stacks the same protection solely because they can be seen by special aerial cameras.

The application of the open fields doctrine to a fully enclosed and secured commercial plant threatens the long

standing privacy rights traditionally afforded to businesses.[1] So long as EPA's actions are deemed lawful, it is impossible for the chemical industry to effectively protect its trade secrets because a competitor can lawfully acquire this information from EPA under the Freedom of Information Act, 5 U.S.C. § 552 (1980), before it has been designated as a trade secret.

No public good is accomplished by expanding the open fields doctrine to the fully developed and secured but unroofed confines of a manufacturing plant. None of the photographs revealed violations of the Clean Air Act. The overflight was merely an effort to obtain information without probable cause. There is no justification for the continuation of these overflights on that basis.

EPA has advanced no convincing reason to justify its exemption from the rule that a warrant is required for an administrative search. Exceptions to the requirement of a warrant reflect the exigencies and practicalities of law enforcement. However, no such exigencies justify EPA's warrantless overflights of the Dow plant because Dow could not hide any violation of the Clean Air Act by shutting down its plant for a few days solely to avoid EPA photography.

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[1]This Court has unequivocally recognized that Fourth Amendment protection extends to commercial areas. *Camara v. Municipal Court*, 387 U.S. 523, 528-29 (1967) (warrant is necessary for an administrative search of business premises); *Marshall v. Barlow's Inc.*, 436 U.S. 307 (1978) (warrant is necessary for search under OSHA); and *G. M. Leasing Corp. v. United States*, 429 U.S. 338, 348 (1977) (recognizing a civil claim against the IRS for violation of privacy rights in business premises).

ARGUMENT

Introduction

The Sixth Circuit's decision in *Dow Chemical Co. v. United States,* 749 F.2d 307 (6th Cir. 1984) has far reaching consequences for all manufacturing industries regulated by the EPA. By necessity, key protected processes used by these industries are located in the interior but unroofed parts of a plant. It is an accepted fact that, with the exception of specialty chemicals, most manufacturing plants must install critical aspects of their facilities out-of-doors. As a result, the Sixth Circuit's holding will affect petroleum refineries and petro-chemical manufacturers, as well as the chemical manufacturing industry, all of which locate key parts of their plants outside the buildings.

The law protects Dow's proprietary interest in these integral manufacturing components because, in the context of the entire plant, they are a blue print that shows how these chemical products are made.[2] The typical chemical plant covers hundreds to thousands of acres on which numerous buildings are located. *See generally* Peters and Timmerhaus, *Plant Design and Economics for*

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[2]This Court has held that a trade secret is a property right and its loss is compensable under the Fifth Amendment. In *Ruckelshaus v. Monsanto Co.,* 104 S.Ct. 2862, 2878 (1984), this Court explained the reasons for trade secret protection.

> Because of the intangible nature of a trade secret, the extent of the property right therein is defined by the extent to which the owner of the secret protects his interest from disclosure to others. . . . Information that is public knowledge or that is generally known in an industry cannot be a trade secret. . . . If an individual discloses his trade secret to others who are under no obligation to protect the confidentiality of the information, or otherwise publicly discloses the secret, his property right is extinguished. (Citations omitted.)

Chemicals Engineers, McGraw Hill (3d ed. 1980). These buildings are interconnected by pipes, wires, and smoke stacks that are an integral part of the manufacturing process.[3]

Aerial photographs, like those taken of the Midland plant, reveal the shape of the buildings plus the location and type of products that are unloaded and stored. The apparently random configuration of the buildings, and the external structures tell the experienced chemical engineer not only the product that is manufactured, but how it is done. The damage is multiplied when these trade secrets are memorialized in detailed photographs that can be carefully studied. For this reason, the chemical manufacturing industry zealously guards against any breach of its security. *Dow Chemical Co. v. United States,* 536 F. Supp. 1355, 1364-65 (D. Mich. 1982). [Petitioner's Appendix B, pp. 1319-21.]

Dow's plant, like those of other manufacturers, is entirely fenced to prevent even casual observation. The companies employ round-the-clock security guards who restrict entrance to employees and authorized visitors. Sophisticated surveillance systems are also installed to monitor all activities inside the plant. As an additional precaution against industrial espionage, the security guards, as well as employees, are told to keep an eye out for suspicious looking aircraft overhead. Cf. *E. I. duPont deNemours & Co. v. Christopher,* 431 F.2d 1012 (5th Cir. 1970), *cert. denied,* 400 U.S. 1024 (1971), *reh'g. denied,* 401 U.S. 967.

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[3]The Sixth Circuit incorrectly treats the areas between the buildings as if they were unoccupied like an open field. *Dow Chemical Co. v. United States,* 749 F.2d 307, 313 (6th Cir.

(Continued on the next page)

I. EPA Should Not Be Exempted From Having To Obtain A Search Warrant For Overflights.

The Sixth Circuit's decision threatens the ability of America's manufacturing industries to protect their trade secrets from dissemination under the Freedom of Information Act. Moreover, no public policy is advanced by extending the open fields doctrine to outdoor manufacturing facilities.

EPA has never established any reason that it should not be required to obtain a warrant in these circumstances. Exceptions to the presumption of law that any search requires a warrant are built around the practicalities and exigencies of law enforcement.[4] The smoke stacks that were allegedly the focus of EPA surveillance are not contraband nor are they moveable. Dow could not evade environmental law enforcement by changing the building's structure or closing the plant, because it would cost thousands of dollars to do so. This case involves a type of administrative search that should never be conducted without a warrant.

The facts in the record substantiate the absence of any legitimate reason for EPA to engage in these warrantless aerial searches. Dow had cooperated with EPA on its first inspection of the plant. Dow objected to the request for

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(Continued from the previous page)

1984) [Petitioner's Appendix, p. A-10]. The open air processes for which Dow seeks protection under the Fourth Amendment fully occupy the spaces between these buildings. These pipes, wires, and smoke stacks cover many acres and for reasons of safety, cost, and practicality, cannot be roofed to avoid aerial surveillance.

[4]This Court has upheld warrantless administrative searches in industries that have a history of pervasive regulation, like liquor and firearms. *Donovan v. Dewey*, 452 U.S. 594 (1980).

permission to take photographs because EPA gave no reason nor placed any limits on what it wanted to photograph. There were other means to obtain evidence that the Midland plant was not in compliance. This kind of investigation is neither authorized under the Clean Air Act nor supported by the Constitution.

The Sixth Circuit's conclusion that Section 114 of the Clean Air Act, 42 U.S.C. § 7414, impliedly authorizes warrantless aerial surveillance legislates by judicial decision the very authority that Congress declined to give the EPA.[5] Section 114 was the product of extensive Congressional debate and negotiation. The courts should not be permitted to imply powers of enforcement that Congress chose not to grant.

II. The Decision Below Conflicts In Principle With Decisions Of The Seventh And Ninth Circuits By Refusing To Apply Curtilage Protection To Commercial Areas.

The Sixth Circuit's conclusion that a business has no Fourth Amendment protection for its curtilage conflicts with decisions in the Seventh and Ninth Circuits. The portions of the Dow plant that the petitioner seeks to protect clearly fall within the common law notion of curtilage.[6] However, the Sixth Circuit stated that:

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[5]Section 114 provisions appear in virtually identical form in the Clean Water Act, 33 U.S.C. § 1318, the Resource Conservation and Recovery Act, 42 U.S.C. § 6927, and the Toxic Substances Control Act, 15 U.S.C. § 2610. Therefore, the Sixth Circuit's expansion of EPA's authority goes far beyond the facts of this case.

[6]The curtilage is the area adjacent to a structure that is protected by the Fourth Amendment, because its proximity and relationship to the structure also entitles it to protection. *Care v. United States*, 231 F.2d 22 (10th Cir. 1956).

> Dow's reasonable privacy interest in the interior of its buildings does not extend into the areas between the buildings because, unlike the home setting, there is no compelling reason in terms of privacy to justify this extension. After a diligent search we have found no cases applying the curtilage concept to the commercial setting. Although there may be some places for research and development or employee interaction which justify an extension of the concept, we hold that the common law curtilage doctrine does not apply to this particular manufacturing setting.

Dow Chemical Co., 749 F.2d at 313 [Petitioner's Appendix A, p. A-12].

In contrast to the Sixth Circuit, the Seventh and Ninth Circuits have applied the curtilage doctrine to commercial settings. In *United States v. Swart*, 679 F.2d 698 (7th Cir. 1982), the court rejected evidence of the registration numbers of cars parked in the lot of a closed repair shop because:

> First, *Katz* would preclude an absolute rule that anything beyond a specific distance from a dwelling or business is in an area unprotected by the Fourth Amendment. Second, in the instant case, there were sheds near the garage and the affidavit supporting the search warrant said the cars were in the area surrounding the sheds and garage. Therefore, the cars may have been within the curtilage of the business buildings.

Id. at 702. The curtilage doctrine also extended Fourth Amendment protection to fir trees stacked in an open lot behind a motel in *Wattenburg v. United States*, 388 F.2d 853, 857 (9th Cir. 1968). *See also, United States v. FMC Corp.*, 428 F. Supp. 615 (W.D.N.Y. 1977) (recognizing right of privacy in fenced lagoon located on industrial plant site).

The integral manufacturing components adjacent to the Midland plant buildings are within the curtilage.[7] The outdoor manufacturing processes are connected to the buildings and are an integral part of the buildings' functions. As an extension of the buildings already protected by the Fourth Amendment, they are also entitled to Fourth Amendment protection.[8]

III. The Sixth Circuit's Decision Conflicts With Common Law Expectations Of Privacy Under The Fourth Amendment.

The extension of the open fields doctrine to a manufacturing plant distorts the public interest objectives of the open fields exception and is out of line with the law of the Fourth Amendment. Only last year in *Oliver v. United States,* 104 S.Ct. 1735 (1984), this Court affirmed the long standing rights of privacy in a business setting. "The Fourth Amendment's protection of offices and commercial buildings, in which there may be legitimate expectations of privacy, is also based upon societal expectations that have deep roots in the history of the Amendment." *Id.* at 1740, n. 8.

The open fields doctrine has generally been limited to just that—an open field. This Court recognized the limits of its holding in *Oliver* when it stated:

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[7]The Sixth Circuit conceded that Dow was entitled to Fourth Amendment protection of the interior of the buildings. *Dow Chemical Co.,* 749 F.2d at 312 [Petitioner's Appendix A, p. A-12].

[8]Ironically, the Sixth Circuit was troubled by the large area covered by the outdoor manufacturing components. However, expanse alone should not preclude the application of the curtilage doctrine. Indeed, as has been argued here, expanse is the main reason that Dow could not roof the sensitive portions of the plant.

> Moreover, as a practical matter these lands usually are accessible to the public and the police in ways that a home, an office, or commercial structure would not be. It is not generally true that fences or no trespassing signs effectively bar the public from viewing open fields in rural areas. . . . the asserted expectation of privacy in open fields is not an expectation that society recognizes as reasonable.

Id. at 1740.

The open fields doctrine is also limited to undeveloped and unoccupied areas. This Court wrote:

> It is clear, however, that the term "open fields" may include any unoccupied or undeveloped area outside of the curtilage. An open field need be neither "open" nor a "field" as those terms are used in common speech. For example, contrary to respondent Thornton's suggestion, Tr. of Oral Arg. 21-22, a thickly wooded area nonetheless may be an open field as that term is used in construing the Fourth Amendment. (Citations omitted.)

Id. at 1741, n. 11.

The Sixth Circuit's application of the open field doctrine to a developed site goes far beyond its scope and, as a result, diminishes the recognized privacy rights of the manufacturing industry. The areas that Dow objects to being photographed were not open spaces as described by the Sixth Circuit. The ground was covered with pipes and wires. If the Midland plant is an open field, then there is little land in the nation that is not an open field.

IV. EPA Aerial Surveillance Conflicts With Expectations Of Privacy Recognized By The Fifth Circuit In E. I. duPont deNemours & Co. v. Christopher.

The Sixth Circuit's decision establishes a public policy that interferes with a business' right and ability to protect its trade secrets. The Sixth Circuit concluded that society did not recognize an expectation of privacy because Dow had failed to roof the expanse of land covered by the manufacturing components for which Dow claims trade secret protection.[9] This conclusion flies in the face of the common law that would recognize a right of privacy by according Dow a claim against any third party that might attempt to take photographs of the facility. As establisted in *E. I. duPont deNemours & Co. v. Christopher*, 431 F.2d 1012 (5th Cir. 1970), *cert. denied*, 400 U.S. 1024 (1971), *reh'g. denied*, 401 U.S. 967, the fact that parts of the plant can be seen from the air does not make the surveillance any less unlawful. The court specifically held that:

> The question remaining is whether aerial photography of plant construction is an improper means of obtaining another's trade secret. We conclude that it is and that the Texas courts would so hold.
>
> One may use his competitor's secret process if he discovers the process by reverse engineering applied to the finished product; one may use a competitor's process if he discovers it by his own independent research;

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[9]The Sixth Circuit used the test enunciated in Justice Harlan's concurring opinion in *Katz v. United States*, 389 U.S. 347, 361 (1967) that defines the parameters of the Fourth Amendment as follows. "[T]here is a twofold requirement, first that a person have exhibited an actual (subjective) expectation of privacy and, second, that the expectation be one that society is prepared to recognize as 'reasonable.'"

> but one may not avoid these labors by taking the process from the discoverer without his permission at a time when he is taking reasonable precautions to maintain its secrecy. To obtain knowledge of a process without spending the time and money to discover it independently is *improper* unless the holder voluntarily discloses it or fails to take reasonable precautions to ensure its secrecy.

Id. at 1015-16. (Emphasis in original.)[10]

Many other amici member companies have been subjected to EPA surveillance. Counsel for Allied Chemical Corporation reported that in 1980 he filed a request for aerial photographs under the Freedom of Information Act (FOIA), 5 U.S.C. § 552 (1980). EPA responded by sending dozens of photographs of chemical plants, several of which depicted his own company's plants. Until Allied received the photos under FIA, the company had no inkling that EPA had conducted the overflights.[11]

EPA's cavalier attitude in the handling of photographs in the Dow case and the incident described above

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[10]This Court has disapproved the acquisition of trade secrets by aerial surveillance. "The law also protects the holder of a trade secret against disclosure or use when the knowledge is gained, not by the owner's volition, but by some 'improper means'. *Restatement of Torts*, § 757(a), which may include theft, wiretapping, or even aerial surveillance." *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 475-76 (1974).

[11]A company can ask for trade secret designation in order to limit further dissemination under FOIA. However, unless the company knows about the overflights and sees the photos, it has no way to insist on trade secret protection from EPA.

has been repeated with alarming frequency over the last five years. If the companies had some right to notice of overflight, such as being served with a warrant, then they could ask that EPA protect this information. Without the requirement of a warrant, these companies face the loss of their trade secrets without any recourse against EPA or a competitor.[12]

CONCLUSION

The Sixth Circuit's decision has far reaching implications for not only the chemical industry but for all industries subject to administrative inspections. For these reasons, the Mountain States Legal Foundation and the Chamber of Commerce of the United States respectfully request that this Court issue a writ of certiorari to the Court of Appeals for the Sixth Circuit.

Respectfully submitted,

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[12]The common law only protects a trade secret if it is obtained unlawfully or through unauthorized disclosure. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974).

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ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE SIXTH CIRCUIT

JOINT APPENDIX

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Letter Dated 10/22/76 Regarding Dow Plant/Photo Security, Attached to Dow's Supplemental Answers to Interrogatories Filed 9/25/80, and an Exhibit to Michael Kelyman (Dow) Deposition of 3/25/81 – Dist. Ct. Dkt. 80 and 131 . . . . . A-19

Letter Dated 7/7/77 Regarding Dow Plant Security, Attached to Dow's Answers to Interrogatories Filed 5/2/80, and an Exhibit to Michael Kelyman (Dow) Deposition of 3/35/81 – Dist. Ct. Dkt. 56 and 131 . . . . . A-20

Letter Dated 4/18/78 Regarding Suspicious Aircraft Over the Plant, Attached as an Exhibit to Michael Kelyman (Dow) Deposition of 3/25/81 – Dist. Ct. Dkt. 131 . . . . . A-21

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Deposition Excerpt of Jack Brown (Dow) – 5/9/78 (pp. 9-13) – Dist. Ct. Dkt. 18 . . . . . A-22

Deposition Excerpt of William E. Beyer (EPA) – 1/9/79 (pp. 19, 23-25, 34-35) – Dist. Ct. Dkt. 30 . . . . . A-25

Deposition Excerpt of Michael Smith (EPA) – 11/2/78 (pp. 23-24, 34, 41-43, 70, 87-88) – Dist. Ct. Dkt. 29 A-28

EPA Letter of 2/3/78 Requesting Aerial Photography of Dow, Attached as Exhibit 1 to James O. McDonald (EPA) Deposition of 11/2/78 – Dist. Ct. Dkt. 27 . . . . . A-32

EPA's Answers to Interrogatories Filed 6/29/78 (#s 2, 4, 6, 7, 8, 20, 39, 47) – Dist. Ct. Dkt. 22 . . . . . A-33

Affidavit of Clayton E. Lake (EPA) Dated 6/10/81, in Support of U.S.'s Response to Dow's Opposition to U.S.'s Motion For Summary Judgment Filed 10/31/81 – Dist. Ct. Dkt. 187 . . . . . A-36

Deposition Excerpt of Clayton E. Lake (EPA) – 2/7/79 (pp. 29-32, 66-67, Exhs. 2D, 2E, 2G) – Dist. Ct. Dkt. 41 . . . . . A-39

Affidavit of Thomas M. Schafer (Abrams Aerial, Inc.), Attached to Complaint Filed March 15, 1978 – Dist. Ct. Dkt. 3 . . . . . A-45

Deposition Excerpt of Clayton E. Lake (EPA) – 7/14/81 (pp. 49-50, 80-82, 84-86) – Dist. Ct. Dkt. 253 . . . A-47

Affidavit of William E. Beyer (EPA) Dated 6/15/81, in Support of U.S.'s Response to Dow's Opposition to U.S.'s Motion For Summary Judgment Filed 10/13/81 – Dist. Ct. Dkt. 187 . . . . . A-51

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Affidavit of Stephen H. Rothblatt (EPA) Dated 6/15/81, in Support of U.S.'s Response to Dow's Opposition to U.S.'s Motion For Summary Judgment Filed 10/13/81 – Dist. Ct. Dkt. 187 . . . . . A-52

Photographs – Exhibits 2 and 3 (under Seal) and Exhibit 7 in Support of Dow's Reply to U.S.'s Opposition to Dow's Motion For Summary Judgment – Dist. Ct. Dkt. 168 and 170 . . . . . *see Sealed Joint Appendix*

Photographs – Exhibits 4 and 5 (under Seal) Excerpts* in Support of Dow's Reply to U.S.'s Opposition to Dow's Motion For Summary Judgment – Dist. Ct. Dkt. 168 and 171 . . . . . *see Sealed Joint Appendix*

Affidavit of H. V. (Jack) Wait, Jr. (Dow) Dated 7/30/81 in Support of Dow's Reply to U.S.'s Opposition to Dow's Motion For Summary Judgment Filed 8/17/81 – Dist. Ct. Dkt. 168 . . . . . A-53

Affidavit of Sherman Hollander (Mich. DNR) Dated 8/4/81, in Support of Dow's Reply to U.S.'s Opposition to Dow's Motion For Summary Judgment Filed 8/17/81 – Dist. Ct. Dkt. 168 . . . . . A-54

Affidavit of Michael Kelyman (Dow), Attached to Complaint Filed March 15, 1978 – Dist. Ct. Dkt. 2 A-55

Affidavit of Leroy L. Mastic, Jr. (Dow), Attached to Complaint Filed March 15, 1978 – Dist. Ct. Dkt. 4 A-57

Affidavit of Robert R. Bumb (Dow), Attached to Complaint Filed March 15, 1978 – Dist. Ct. Dkt. 5 A-63

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* The original exhibits are available to the Court as part of the record. Due to the size of the original exhibits, it is impossible to include them in the Joint Appendix. The excerpts are "cropped" portions of the original exhibits.

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Deposition Excerpt of Leroy L. Mastic, Jr. (Dow) – 5/9/78 (pp. 11-16) – Dist. Ct. Dkt. 17 . . . . . A-69

Deposition Excerpt of H. V. (Jack) Wait, Jr. (Dow) – 5/10/78 (pp. 11-14, 20) – Dist. Ct. Dkt. 19 . . . . . A-72

Deposition Excerpt of Leroy L. Mastic, Jr. (Dow) – 3/24/81 (pp. 51-53, 88-89) – Dist. Ct. Dkt. 130 . . . . A-76

Deposition Excerpt of Michael Kelyman (Dow) – 3/25/81 (pp. 78-79, 121-123, 181) – Dist. Ct. Dkt. 131 . . . . . A-79

Deposition Excerpt of H. V. (Jack) Wait, Jr. (Dow) – 4/8/81 (pp. 40, 43-46, 50-51) – Dist. Ct. Dkt. 152 . . A-82

Letter Dated 6/21/79 from Union Carbide Corporation to EPA Regarding Aerial Surveillance per EPA's Supplemental Answers to Interrogatories Filed 4/17/81 – Dist. Ct. Dkt. 134 . . . . . A-86

Letter Dated 6/22/79 from FMC Corporation to EPA Regarding Aerial Surveillance per EPA's Supplemental Answers to Interrogatories Filed 4/17/81 – Dist. Ct. Dkt. 134 . . . . . A-89

Wire Dated 1/11/80 from EPA to Monsanto Regarding Aerial Photography, Attached to Dow's Motion to Compel Discovery Filed 3/26/81 – Dist. Ct. Dkt. 117 . . . . . A-91

Wire Dated 1/14/80 from Monsanto to EPA Regarding Aerial Photography, Attached to Dow's Motion to Compel Discovery Filed 3/26/81 – Dist. Ct. Dkt. 117 . . . . . A-92

Wire Dated 1/17/80 from EPA to Monsanto Regarding Aerial Photography, Attached to Dow's Motion to Compel Discovery Filed 3/26/81 – Dist Ct. Dkt. 117 . . . . . A-93

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Transcript Excerpt of 11/12/81 Oral Argument on Cross Motions for Summary Judgment (p. 44) – Dist. Ct. Dkt. 232 . . . . . A-94

Order Allowing Certiorari – Supreme Court of the United States, June 10, 1985 . . . . . A-94

Non-Fully Owned Subsidiaries And Affiliates of The Dow Chemical Company as of June 30, 1985 A-95

The following opinions and references have been omitted in printing this Joint Appendix because they appear in the Appendix to the Petition for Certiorari.

PETITION APPENDIX

Opinion of the U.S. District Court of Appeals for the Sixth Circuit, Filed November 9, 1984 . . . . . A

Opinion of the U.S. District Court for the Eastern District of Michigan, Filed April 19, 1982 . . . . . B

Excerpts from Restatement of Torts § 757 (1939) C

Uniform Trade Secrets Act . . . . . D

Relevant Michigan Compiled Laws:
Mich. Comp. Laws § 750.539a and d . . . . E
Mich. Comp. Laws § 752.771 . . . . . E
Mich. Comp. Laws § 751.772 . . . . . E

No. 84-1259

IN THE

Supreme Court of the United States

October Term, 1984

THE DOW CHEMICAL COMPANY,
Petitioner,

versus

UNITED STATES OF AMERICA,
BY AND THROUGH ADMINISTRATOR,
ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE SIXTH CIRCUIT

JOINT APPENDIX

RELEVANT DOCKET ENTRIES

(United States District Court —
Eastern District of Michigan — No. 78-10044)

DATE	*N.R.*	*PROCEEDINGS*
1978		
3/15	1.	Filed complaint w/attached exhibit. Summons issued.
3/15	2.	Affidavit of Michael (NMI) Kelyman.
3/15	3.	Affidavit of Thomas M. Schafer.

DATE	N.R.	PROCEEDINGS
3/15	4.	Affidavit of Leroy L. Mastic, Jr.
3/15	5.	Affidavit of Robert R. Bumb.
3/15	6.	Motion for preliminary injunction.
3/15	8.	Motion for temporary restraining order w/ certification of counsel.
3/17	11.	Temporary Restraining Order (3/16/78) (C. Joiner) IT IS ORDERED that defendant Douglas M. Costle, Administrator, Environmental Protection Agency, his agents, employees, contractors and any other parties acting in concert with them be and they hereby are temporarily restrained from in any way disseminating, releasing, copying, or duplicating the photographs which it had taken of Dow's plant in Midland, Michigan, or from disseminating or releasing any information obtained in any way from said photographs pending a hearing and determination of plaintiff's Motion for Preliminary Injunction, conditioned further that plaintiff, Dow, not be required to post any bond for the payment of such costs and damages as may be incurred or suffered by any party who is found to have been wrongfully enjoined or restrained, excepting that the photographs may be used by those EPA employees who are currently involved in the preparation of an enforcement action against Dow under the Clean Air Act, and by Thomas M. Woods and Ronald W. Mellish of the United States Attorney's office

DATE	N.R.	PROCEEDINGS

3/17 *cont.* in the preparation of said enforcement action. IT IS FURTHER ORDERED that the term of this order shall be until April 7, 1978, at 5 p.m. unless extended by further order of the Court.

4/7 15. STIP & ORDER FOR PRELIMINARY INJUNCTION J. Harvey

1. That the defendant Douglas M. Costle Administrator, Environmental Protection Agency, his agents, members, contractors and any other parties acting in concert with them be and they hereby are enjoined from in any way disseminating, releasing, copying or duplicating the photographs which it had taken of Dow's plant in Midland, Michigan, or from disseminating or releasing any information obtained in any way from said photographs while this order remains in effect.

2. That all the negatives, prints, enlargements and mosaics which are the subject matter of this action and any written abstracts therefrom, shall be sealed and placed in the custody of the Court and shall thus be maintained until further order of the Court.

3. Such photographs, negatives, prints, enlargements and mosaics shall be available to those Environmental Protection Agency employees who are currently involved in the preparation of an enforcement action against Dow under the Clean Air Act, and by Thomas M. Woods and

DATE	N.R.	PROCEEDINGS
4/7 *cont.*		Ronald Mellish of the United States Attorney's office and Charlotte Uram of the Justice Department in the preparation of said enforcement action; provided, however, that notice shall be given to counsel for the plaintiff prior to any such use and counsel for the plaintiff, or his designee, may be present at such inspection. 4. Nothing contained in this Preliminary Injunction shall in any way be construed as affecting or determining any of the rights of the parties or any of the issues involved in the case, nor shall any of the contents herein be construed as an admission by any party. 5. Either party may move for dissolution or modification of this Order and within five (5) days thereafter a hearing shall be held and at such hearing consideration of the continuance of this Preliminary Injunction or the issuance of any other Order shall be determined de novo.
5/22	17.	transcript of dep of Leroy L. Mastic, Jr.
..	18.	.. .. Jack Brown
..	19.	.. .. Jack Wait
6/29	22.	Def's Answers to Plf's First Interrogatories
8/14	23.	Def's Answer to Complaint w/proof
12/6	27.	transcript of James McDonald
12/15	29.	transcript of Michael Smith

DATE	N.R.	PROCEEDINGS
1979		
2/9	30.	transcript of Dep of Wm. Beyer
4/20	41.	Deposition of C Lake.
1980		
5/2	56.	Pltf's Objection and Answers to Deft's Interrogatories to Pltf and Request to Produce Documents.
5/2	57.	Pltf's Motion for Protective Order w/Memo in Support of.
6/9	59.	ORDER J. Harvey s/6-5-80 w/proof. IT IS HEREBY ORDERED that pltf be permitted to file its amended complaint. Further, since pltf has already filed a copy of its proposed amended complaint, Pltf need not refile another copy with the Court. The date of this Order Shall be deemed the date of filing of the amended complaint for purposes of deft's answer thereto. FR Civ P 15(a).
6/26	61.	Pltf's Amended Complaint.
7/22	67.	MEMORANDUM OPINION AND ORDER J. Harvey w/proof. Pltf's Motion for protective order is hereby GRANTED. See Order for further information.
9/9	76.	Deft Douglas M. Costle ANSWER TO PLTF'S AMENDED COMPLAINT.
9/25	79.	Pltf's Notice of Motion for Discovery Conference w/Motion for Discovery Conf and Memorandum in Support of.

DATE	N.R.	PROCEEDINGS
9/25	80.	Pltf's Supplemental Answers to Deft's Interrogatories to Pltf and Request to Produce Documents w/exhibits.
11/3	92.	Pltf's Supplemental Memorandum In Support of Motion for Discovery Conference w/proof.
1981		
3/26	117.	Pltf's Motion for An Order Compelling Discovery w/brief and proof.
3/26	120.	Pltf's Notice of Motion for Partial Summary Judgment w/Motion for Partial Summary Judgment, Brief and proof.
4/7	124.	Deft's Opposition to Pltf's Motion for Partial Summary Judgment and Motion for Continuance, w/memorandum, affidavit and cert of service; w/Proposed Order
4/13	130.	Deposition of Leroy Mastic.
4/13	131.	Deposition of Michael Kelyman.
4/17	134.	Deft's Costel's Supplemental Answer to Pltf's Second Interrogatories and Request for Production of Documents w/cert of service and attachment.
5/29	152.	Deposition of (UNDER SEAL)XXXX Volume I.
5/29	153.	Deposition of (UNDER SEAL)XXXXX continued. Volume II.
5/29	154.	Deposition of (UNDER SEAL)XXXX continued, Volume III.

DATE	N.R.	PROCEEDINGS
7/9	162.	Federal Deft's MOTION FOR PARTIAL SUMMARY JUDGMENT and Request for Oral argument w/proof.
7/9	165.	Federal Defts' MEMORANDUM IN OPPOSITION to pltfs mot. for partial summary judgment and in support of federal defts' mot. for partial summary judgment.
8/17	168.	Pltf's Reply to Federal Defts' Memorandum in Opposition to Dow's Motion for Partial Summary Judgment, w/exhibits.
8/17	170.	Exhibits 2 & 3 to Pleading #169 [168]. UNDER SEAL.
8/17	171.	Exhibits 4-5 to Pleading #169 [168]. UNDER SEAL.
8/17	172.	Exhibit 7A to Pleading #169 [168].
9/11	178.	Pltf's Pretrial Motion for Protective Order w/brief and proof.
9/14	181.	Deft's Motion for Partial Summary Judgment or in the Alternative to Dismiss w/ Memorandum in Support of.
9/24	184.	Pltf's Response to Federal Deft's Motion for Partial Summary Judgment or in the Alternative to Dismiss w/attachments and proof.
10/13	187.	Federal Deft's Response to Dow's Opposition to Motion for Summary Judgment or in the Alternative to Dismiss w/cert of service, and affidavits.
10/19	196.	Not. of Oral Hearing on Cross Motions for Summary Judgment set for 11-12-81 @ 1:30 p.m.

DATE	N.R.	PROCEEDINGS
10/27	198.	Stip and Order of Dismissal as to Dept of Defense, Dept of Air Force, Dept of Navy, Central Intelligence Agency, Trident Engineering Associates, Inc., Lookheed Electronics, Inc and Northrup Corp. J. Harvey
11/5	202.	MEMORANDUM OPINION AND ORDER J. Harvey. Pltf's pretrial motion is hereby GRANTED. Court issues a Protective order, see order for details.
11/12	--	Oral Hearing on Cross Motions for SJ held.
1982		
4/19	213.	MEMORANDUM OPINION AND ORDER J. Harvey w/proof The Court hereby GRANTS Dow's motion for partial summary judgment and DENIES EPA's cross-motion for summary judgment. On this basis; IT IS HEREBY ORDERED AND ADJUDGED that EPA is permanently enjoined and restrained from conduction [*sic*] future aerial surveillance and photography of the Dow Chemical manufacturing facility in Midland, Michigan, without first seeking judicial oversight which, at a minimum, will require EPA to secure an ex parte search warrant.
5/3	214.	Deft's Motion for Reconsideration w/ Memorandum and cert of service.
5/12	215.	Pltf's Response to Deft's Motion for Reconsideration w/proof.

DATE	N.R.	PROCEEDINGS
5/13	216.	MEMORANDUM OPINION AND ORDER J. Harvey w/proof. IT IS HEREBY ORDERED AND ADJUDGED that EPA is permanently enjoined and restrained from conduction [*sic*] future aerial surveillance and photography of Dow Chemical Manufacturing facility in Midland, MI.
7/13	217.	NOTICE OF APPEAL by deft w/cert of service.
7/26	218.	MOTION by deft for Reconsideration or, in the Alternative, For Entry of Final Judgment.
7/28	219.	STIPULATION AND ENTRY J. Harvey.
7/29	220.	MOTION by Pltf for Protective Order w/ brief and proof and proposed order.
8/3	222.	MEMORANDUM OPINION AND ORDER J. Harvey Pltf's motion for protective order is hereby GRANTED.
8/4	223.	MEMORANDUM OPINION AND ORDER J. Harvey w/proof. EPA's second motion for reconsideration is hereby DENIED. IT IS SO ORDERED.
9/23	227.	EX PARTE MOTION by deft's for Extension of Time to File Notice of Appeal w/Memorandum and cert of service.
9/27	228.	MEMORANDUM OPINION AND ORDER J. Harvey w/proof Deft's motion for extension of time to file a notice of appeal is hereby GRANTED. Deft's are DIRECTED to file their notice of appeal on or before 10-27-82.

DATE	*N.R.*	*PROCEEDINGS*
10/26	229.	NOTICE OF APPEAL by defts w/cert of service.
11/10	232.	TRANSCRIPT of Proceedings held on 11-12-81.
12/10	233.	ACKNOWLEDGMENT from CCA their case #82-1811.
1985		
6/17	250.	MOTION by deft [pltf] for Release of Items & Exhibits Under Seal.
6/25	251.	ORDER J. Churchill. Accordingly, Dow Motion is hereby GRANTED. IT IS THEREFORE ORDERED that the items and Exhibits currently held under seal by the Court be released into the care, custody, and control of the Dow attorneys for use during the appeal of this case after an inventory & Receipt of Items and Exhibits is made and filed.
7/1	253.	DEPOSITION of CLAYTON LAKE (EPA) taken July 14, 1981.
7/1	255.	DEPOSITION under seal by pltf.

RELEVANT DOCKET ENTRIES
— GENERAL DOCKET —

(United States Court of Appeals
for the Sixth Circuit — Case No. 82-1811)

APPEAL FROM: Eastern District of Michigan, N.D. at Bay City
NO. BELOW: 78-10044
JUDGE BELOW: Harvey
DATE OF JUDGMENT: July 28, and August 7, 1982
NOTICE OF APPEAL FILED: October 26, 1982

DATE		*FILINGS - PROCEEDINGS*
1982		
10/29	1)	Copy of notice of appeal filed; and cause docketed
11/15	2)	Motion: appellee for protective order (m-11/11/82)
12/2	8)	Pre-argument statement filed
1983		
1/13	11)	Order directing that the seal directed by the district court as to certain portions of the district court proceedings shall continue on appeal; counsel is to assure this Court is properly advised as to those materials under seal; briefs and appendix that contain information under seal should be filed in separate volumes; counsel may file a motion as to protective steps they recommend if the Court determines oral argument to be necessary (Peck, J.)

DATE		FILINGS – PROCEEDINGS
3/7		Brief (10) of appellant (m-3/4/83)
4/7		Brief (10) of appellee (m-4/5/83)
4/11		Brief (10) of amicus curiæ, Mountain States Legal Foundation (consent of both parties included in back of brief) (m-4/6/83)
5/5		Reply brief (10) of appellant (m-5/2/83)
9/26		Joint Appendix (5) with one sealed volume (m-9/22/83)
1984		
7/6	28)	Motion: appellee for protective steps for trade secret information at oral argument (m-7/5/84)
7/12		Cause argued by Anne S. Almy for appellant, by Jane Gootee for appellee and case submitted to the Court (Before: Lively, Merritt and Horton, JJ.)
11/9	31)	Judgment of the district court reversed (Lively, Merritt and Horton, JJ.) FP
1985		
2/19	33)	SUPREME COURT NOTICE: petition for cert. filed 2/7/85 (Sup. Ct. No. 84-1259)

MEMO DATED 12/20/60,
REGARDING DOW AERIAL PHOTO POLICY, ATTACHED TO DOW'S SUPPLEMENTAL ANSWERS TO INTERROGATORIES FILED 9/25/80, AND AN EXHIBIT TO MICHAEL KELYMAN (DOW) DEPOSITION OF 3/25/81

DIST. CT. DKT. 80 & 131

THE DOW CHEMICAL COMPANY

To: Chas. Sercu, 574 Bldg. Charge: _____
From: Ned Brandt, Pub. Rel. Problem or Auth.: _____
Subject: Attached Photos Date: 12/20/60 Bldg.: 690

No objection to any of these except the aerial shot of the plant, No. 75033. This one is so old I'd forgotten it existed, and it must have been made before the rule went into effect that we don't release aerial photos of the plant, which went into effect during wartime and per F. C. Peterson is still in effect. No. 4283B58 is a little borderline on this basis but OK, I think, on basis our usual practice. Therefore these all OK except 75033; if used in textbook, we would appreciate a credit line — "Photo Courtesy The Dow Chemical Co." or something similar.

MEMO /s/ Ned Brandt

• • •

LETTER DATED 11/27/73,
REGARDING AERIAL SECURITY, ATTACHED AS AN EXHIBIT TO MICHAEL KELYMAN (DOW) DEPOSITION OF 3/25/81

DIST. CT. DKT. 131

November 27, 1973 *PLANES OVER THE PLANT*

Captains; Dispatchers – c; Scouts – c; Clockrooms: 2, 3, 4, 6, 11, 16, 19; Gates: West, 23, 25, 49; Inspectors; Patrolmen; File

REPORTING PLANES OVER THE PLANT

1. If you have field glasses, make an effort to get the plane number and description (color, size, number of engines, etc.).

2. If you have no field glasses, get the best description, direction of flight, etc., and call the nearest Plant Protection location (see below) that have field glasses so they can attempt to get this information.

3. Make a verbal report of same to this office at once or after hours contact the Captain on duty and also make a written report on same. Management is very much concerned when other than commercial passenger flights pass over the plant property.

   Locations that have field glasses are:

West Gate	#23 Gate
No. 6 Clockroom	#25 Gate
No. 11 Clockroom	Dispatcher 417 Bldg.

4. Dispatcher & Captains: When notified of an unidentified plane over the plant, assign an officer to spot the numbers with the glasses located in the radio room.

NOTE: The State Police Post in Bay City 684-2234 will check airplane *registrations* and help us on flights over the plant.

/s/ S. J. Humbyrd, Asst. Manager
Security & Plant Protection
417 Building

SJH/kh

NOTE: This cancels order on same dated 12-1-72

LETTER DATED 3/25/74, RE *DuPONT* v. *CHRISTOPHER*, ATTACHED AS AN EXHIBIT TO MICHAEL KELYMAN (DOW) DEPOSITION OF 3/25/81

DIST. CT. DKT. 131

Mr. Michael Stinton
Dow Chemical
Midland, Michigan 48640

March 25, 1974

Dear Mike:

Pursuant to your request, I am forwarding a copy of the court decision, involving airplane photography of Du Pont's plant at Beaumont, Texas.

The only apparent follow up to the court's decision, aside from the Supreme Court's declining to review the decision, was Christopher's disclosure, by deposition, that he had been employed to take the photographs by Eber Peters, a management consultant from Beaumont. Peters testified, by deposition, that he was acting only for himself and that he planned to become a consultant on methanol marketing.

I trust that this was the case you had in mind. Hope the trip to Brussels was an enjoyable one.

Best regards,

Very truly yours,

Thomas J. Murphy, Jr.
Security Advisor

LETTER DATED 10/13/76, RE DOW PLANT SECURITY, ATTACHED TO DOW'S ANSWERS TO INTERROGATORIES FILED 5/2/80

DIST. CT. DKT. 56

DOW CHEMICAL U.S.A.
MICHIGAN DIVISION MIDLAND, MICHIGAN 48640

October 13, 1976

[*Addresses Deleted*]

I recently received the attached write-up concerning "Security of Process Know-how and Technology" from Irv Snyder.

The basic responsibility for protecting our process security has been assigned to the Division General Managers and I think you know that means I expect all of you to do a *thorough* job and keep me in good shape. The attached is a good review for all of us. It does an excellent job of covering the precautions that need to be followed.

Technology is the life blood of any company, especially ours, and the importance of protecting this technology cannot be overemphasized. Please see that the attached is given appropriate publicity in each of your departments.

Thanks.

/s/ J. G. Temple, Jr.

Attachment

SECTION 6 *No. 1*

SECURITY OF PROCESS KNOW-HOW AND TECHNOLOGY

The overall responsibility for protecting our process security has been assigned to the Division General Managers, Area Manufacturing Managers, and the Technology Center Managers.

The Manufacturing Representative plays a key role in protecting our process security when he is directing the design and construction of a new facility. He is responsible for seeing that the following are carried out during the course of a project.

1) Material balance flow sheets and detail process design manuals are extremely confidential and are restricted for the use of the Manufacturing Representative *only*. These items are not to be placed in the hands of an engineering contractor, vendor, etc. These items should be placed under lock and key at all times.

2) Every Dow drawing should include a statement, "This drawing is the property of The Dow Chemical Company, and the information contained herein must be treated as CONFIDENTIAL and not revealed to third parties nor may the drawings be reproduced in whole or part except by expressed permission of the Company.

3) If the project or equipment is of a secret nature, the contractor or supplier must sign a formal secrecy agreement. Serialized drawings must be returned to Dow.

4) Where we would prefer that the contractors or vendors do not know the material being handled, our equipment specification sheets, purchase orders, etc. should give the physical properties which are necessary for the equipment design without identifying the material by name or composition.

5) All information going to contractors or vendors should identify equipment by numbers, not by where it is located in the plant or by the process function it performs.

6) Vendors are forbidden to photograph the equipment at any stage of fabrication or reproduce the drawings pertaining to a purchase order to make them available to any source other than to The Dow Chemical Company without the written permission of Dow.

7) Photographs of the project or any part thereof shall not be taken. Contractors shall assist the owner in preventing photographs being taken. Cameras will not be allowed on the owners property

The line organization in each Area is responsible for seeing that the experience and background of prospective new employees are screened to try to determine if this person might later compromise our process know-how and technology.

Visits to our process units by outsiders are discouraged. In no case should tours by professional societies be permitted. Outsiders should not be exposed to our process technology. If people must allow visitors in a process unit, the tour guide must determine the name and company affiliation of each visitor. If a visitor will be exposed to process technology, he must sign a secrecy agreement. By definition, all of our control rooms contain Dow "Trade Secret" information.

/s/ Irving G. Snyder, Jr., Director
Technology Center Administration
2020 Dow Center

gw

9/16/76

LETTER DATED 10/22/76, RE DOW PLANT/PHOTO SECURITY, ATTACHED TO DOW'S SUPPLEMENTAL ANSWERS TO INTERROGATORIES FILED 9/25/80, AND AN EXHIBIT TO MICHAEL KELYMAN (DOW) DEPOSITION OF 3/25/81

DIST. CT. DKT. 80 & 131

DOW CHEMICAL U.S.A.
MICHIGAN DIVISION MIDLAND, MICHIGAN 48640

October 22, 1976

[*Addresses Deleted*]

PHOTOGRAPHY/SECURITY IN THE MICHIGAN DIVISION ON PROCESS KNOW-HOW AND TECHNOLOGY

Please pay special attention to points (6) and (7) regarding photography, and the final paragraph regarding plant visits.

If you have any questions, let's discuss.

/s/ Tom Sinclair
Government/Community Relations
47 Building

z

attach.

SECTION 6 *No. 1*

SECURITY OF PROCESS KNOW-HOW AND TECHNOLOGY

* * *

6) Vendors are forbidden to photograph the equipment at any stage of fabrication or reproduce the drawings pertaining to a purchase order to make them available to any source other than to The Dow Chemical Company without the written permission of Dow.

7) Photographs of the project or any part thereof shall not be taken. Contractors shall assist the owner in preventing photographs being taken. Cameras will not be allowed on the owners property.

* * *

• • •

LETTER DATED 7/7/77, RE DOW PLANT SECURITY, ATTACHED TO DOW'S ANSWERS TO INTERROGATORIES FILED 5/2/80, AND AN EXHIBIT TO MICHAEL KELYMAN (DOW) DEPOSITION OF 3/25/81

DIST. CT. DKT. 56 & 131

DOW CHEMICAL U.S.A.
MICHIGAN DIVISION
July 7, 1977

[*Addresses Deleted*]

Just a reminder of the standing policy — No Michigan Division Plant or equipment photos may be released externally without approval of Tom Sinclair, Michigan Division Public Relations Manager, or Hunter Henry, Michigan Division General Manager.

/s/ Dave Sommers
Government/Community Relations
47 Building
636-6775

z

LETTER DATED 4/18/78,
REGARDING SUSPICIOUS AIRCRAFT OVER THE PLANT,
ATTACHED AS AN EXHIBIT TO MICHAEL KELYMAN
(DOW) DEPOSITION OF 3/25/81

DIST. CT. DKT. 131

April 18, 1978

Captains; Dispatchers

OBTAINING FOLLOW UP INFORMATION
ON SUSPICIOUS AIRCRAFT FLYING OVER THE PLANT

1. Determine if the actions of the pilot in flying over the plant are truly suspicious.
   a. Such as the plane circles around and over the plant 360° or more
   b. If the aircraft makes 3 or more passes over the plant either parallel or cross-secting the production facility.
2. Attempt to get the registration number.
   a. All U.S. registration No's begin with a N, they may range from N1 to N99999. There may be letters at the end of the number.
   b. We must have the complete number to request a registration check.
   c. Call a Mr. Don Arnold of Flight Service (FAA) located at Tri City Airport on 695-2361 (24 hour number)
   d. Call using 636-4400 and identify yourself as Dow Security and if Mr. Arnold is not available someone else should be able to help you.
3. If we are unable to get the registration number and it appears the aircraft in question can be deemed suspicious we should call Mr. Hank Anderson, the tower chief (F.A.A.) at Tri City Airport on 695-9143.

a. Call immediately and give the direction in which the aircraft in question is traveling.
b. Call from 636-4400, advising who answers that Dow Security is calling and we have a suspicious plane over the plant.
c. If the call is prompt and the direction given, the tower should be able to pick up the aircraft on RADAR
d. Depending on the volume of air traffic they will watch the aircraft to see if it lands at an airport on their screen. They will be able to pin point an aircraft within a 40 mile radius of their tower.
e. The tower will call 636-4400 and advise us what airport if any the airplane lands.
f. We should call the airport in question to determine who landed at that time. This call should be made promptly.

AIRPORTS

Alma, 3999 W. Seaman Rd.	463-1338	Gladwin, 735 S. State	426-4201
Bay City, 614 S. River Rd.	895-8991	Mt. Pleasant	772-3500
Caro	673-4301	Owasso, 1510 E. Main	723-4168
Flint, W. Bristol Rd.	767-4232	Saginaw	754-2459

• • •

JACK BROWN (DOW)
DEPOSITION EXCERPT 5/9/78

DIST. CT. DKT. 18

* * *

[9] * * * Q. Has the EPA had the opportunity to inspect the power plants in Midland?

A. Yes sir.

Q. And have they taken advantage of that opportunity?

A. Yes sir

Q. Have they had the opportunity – let me strike that.

Have they had complete tours through both of your powerhouses in Midland?

A. Yes sir.

Q. Have you participated in these tours with the personnel from EPA?

A. I did.

Q. You were there personally?

A. Yes sir.

Q. Okay. Do you recall when that inspection or when those inspections occurred?

A. It was in early September.

* * *

[10] Q. Do you recall how long those inspections lasted?

A. About two, two and a half hours.

Q. Were both powerhouses toured?

A. Yes sir.

Q. Did the inspectors from the EPA ask questions about the operation of the powerhouses?

A. They did.

Q. And did you provide answers to those questions?

A. We did.

Q. Now, subsequent to the visit as you've described it did the EPA request additional information about the powerhouses?

A. They did.

Q. And was that information provided?

A. It was.

Q. Do you know what was requested?

A. Yes, I do.

Q. And could you identify that for us, please?

A. Yes. They wanted some drawings or some information relative to the physical layout around each of the powerhouses and boilers and turbines themselves within the powerhouses.

Q. Did you assist in the preparation of that additional information?

A. I did.

Q. And you again recall the date of that inspection?

A. It was the first week in September, first or second week of [11] September.

Q. Was this in 1977?

A. Yes sir.

Q. Were there any subsequent attempts by the EPA to inspect the plant, the powerhouses?

A. Yes, there was.

Q. Do you recall when that occurred?

A. That was in December, about the first week in December.

Q. Can you describe the circumstances surrounding that attempt to inspect the plant, please?

A. Yes. There was an EPA engineer presented himself at one of our gates and had been observing the effluent from our stacks.

Q. Did he produce his credentials?

A. He did not to me at that time. When I met him he was already in the plant with one of our environmental engineers.

Q. Do you know whether or not he did present credentials at that time?

A. I do not, at that time.

Q. Are you aware of any other attempts by the EPA to inspect the power plants at the Midland facility?

A. Yes sir.

Q. And would you describe those attempts, please?

A. Subsequent to that a contractor for EPA was here on at least two occasions that I know of.

Q. Do you recall the dates?

[12] A. It was sometime in late December he made — at that time he made no attempts to come in. I was informed later he had been here.

However, in early February, which I believe was the first or second of February, this contractor for EPA did present himself at the gate.

Q. Was he admitted?

A. He was not.

* * *

[13] * * * Q. Does that report indicate the nature of the subsequent requests for information made by the agency?

A. It does.

Q. Does it indicate whether or not information — whether or not you provided them with any photographic information with respect to the power plants?

A. It does.

Q. Do you recall what you did provide them with?

A. Yes. We provided them with slides of — or photostats of slides showing the physical age of each of the powerhouses and the fuel capabilities.

Q. Did you subsequently and at the request of the EPA provide them with drawings of the power plants?

A. We did.

* * *

• • •

WILLIAM E. BEYER (EPA)
DEPOSITION EXCERPT 1/9/79

DIST. CT. DKT. 30

* * *

[19] * * * Q. And, that visit took place on September 9th, 1977, is that right?

A. I am sure it was September. If you say the 9th.

Q. Well, I am not testifying, you are. If you are not certain as to the date, you —

A. I am sure it was September.

Q. How long did that visit to the Midland Facility last?

A. As I remember, it was about three hours.

Q. And, was the visit motivated by an impending enforcement action, or a contemplated enforcement action by Region 5?

A. Yes.

Q. So, you were there, were you not, to make a determination, or to make an inspection to satisfy yourself as to whether or not there was, in fact, a violation of the Clean Air Act, is that correct?

A. Yes, that's correct.

* * *

[23] * * * Q. When you visited the Dow Facility in September of 1977, did you receive co-operation from the company in allowing you access to those areas you wanted to inspect?

A. Yes.

Q. And, what were the areas that you desired [24] to inspect?

A. The only areas that we had asked to inspect were the boiler plants.

Q. And, there are two of those, is that right?

A. Yes.

Q. And, you were allowed the opportunity to inspect them, is that right?

A. Yes.

Q. And, you spent approximately three hours in doing so?

A. As I remember, the whole visit took about three hours. Part of the time was used for some discussion.

Q. How much time — as you can recall now, how much of that three-hour period was spent in actually inspecting the facilities?

A. I would estimate two hours.

Q. Were you satisfied with the inspection that you made?

A. At the time, as I recall, yes.

Q. Did you secure the information from Dow that you went there to gather?

A. Again, as I recall, I have to say yes. I can't recall anything that I felt was missing.

[25] Q. And, again, the purpose of your visit was to determine the compliance of Dow's two power facilities with the Clean Air Act, is that right?

A. Yes.

Q. And, you secured enough information, did you, to make that determination when you visited the power facilities in September of 1977?

A. I felt before the visit that I had enough information to support, or to confirm that there was a violation, but the visit I felt was made to substantiate that.

Q. And, were you able to substantiate that in your mind?

A. I felt that I did, yes.

Q. And, again, you had the full co-operation of the Dow people when you were there?

A. Yes.

Q. And, they withheld nothing from you that you asked to inspect or see, is that right?

A. That's right.

* * *

[34] * * * Q. Okay. Now, in December of 1977 a second request was made to visit the Dow Facility, was it not?

A. I heard of it.

Q. Did you make that request?

A. I did not make it.

Q. In December of 1977, did you, as the engineer half of the attorney-engineer team, concerned with Dow's Midland Facility, did you feel that there was a need for any more data, from your standpoint, with respect to the power plants?

A. I can't recall any feeling that there was, that I needed any more.

Q. Your recollection today is that you had obtained, either prior to September 9th, or as a result of your September 9th visit, sufficient technical information from Dow, or from your [35] inspection to satisfy your particular requirements as to Dow's compliance or lack of compliance?

A. Yes.

* * *

• • •

MICHAEL SMITH (EPA)
DEPOSITION EXCERPT 11/2/78

DIST. CT. DKT. 29

* * *

[23] * * * Q. What requests were made subsequent to the September visit?

A. There was a request to enter the plant at a later date.

Q. Who made that request?

A. I did.

Q. And who did you make it of?

A. I believe I called Lou Pribila.

[24] Q. And do you recall the date?

A. In December.

Q. And do you recall the response you got then?

A. I got no response. The day of — Lou Pribila replied that he would check with management on the

day that I made the request. The day after I made the request, he called back and said that that — the request would have to be denied.

Q. All right. Did you advise him as to the reason that you wanted entry?

A. Yes.

Q. And what reason did you give him?

A. I told him that we wished to inspect the boiler facilities and the incinerator facilities.

Q. Did either your request in September or December of 1977 include a request to bring photographic equipment on to the premises?

A. In the December request, I mentioned that our engineers would be bringing a camera.

Q. And what was the reason for that?

A. To take pictures of the facilities and the lay out.

* * *

[34] * * * Q. Okay. Now, December 2nd, 1977, Pribila notified that Dow would not admit EPA personnel to the Midland facility, is that correct?

A. He notified us that we would not be allowed to enter on December 5th, that is correct.

Q. Well, that notice to you was on December 2nd, correct?

A. That's correct.

Q. Did there come a time after that telephone conversation between yourself and Mr. Pribila that a decision was made to take aerial photographs of the Dow Midland Facilities?

A. The decision to take aerial photographs came after that date, yes.

* * *

[41] * * * Q. Do you recall what the purpose of the aerial photography was, as represented to you at the time the flight was authorized?

A. Yes. The purpose was to support litigation in the case.

Q. That is under enforcement action under the [42] Clean Air Act?

A. That's correct.

Q. What particular information were you seeking by means of that aerial photography mission?

A. Well, a great deal of very general and specific information. We wanted to visualize any emissions that would have been coming out of the stacks, and to see the West Side Power Plant, and the South Side Power Plant, and the incinerator, and the layouts of those facilities, and the relationship of the other facilities within the plant to the town of Midland, surrounding the plant. We would also like to look at any effects on surrounding vegetation or notice of any emissions coming out of the facilities.

Q. Were those photographs intended to supply anything that had not previously been supplied to you by Dow?

A. Yes.

Q. And, what specifically?

A. I listed several. In addition — I have just listed several. In addition, the use of the [43] photographs would be to verify the information that had been submitted by Dow, and I have already said to actually visualize emissions.

Q. That could have been done, could it not, without recourse to an aerial photograph?

A. I don't know that it could or not.

* * *

[70] * * * A. Much of the information I have listed as being purposes for taking the photographs could probably have been obtained by exhaustive site inspections, walking around various parts of the plant by EPA personnel.

Q. And, that could have been conducted without any risk to Dow's proprietary technology and trade secrets, correct?

A. I don't know.

* * *

[87] * * * MR. GLEESON: We are back on the record. Mr. Smith, you were going to obtain for us the date that the Complaint was drafted. Have you secured that date for us?

THE WITNESS: A. Okay. The draft Complaint within this Agency is put together in the normal procedure. In an enforcement action, it is to put together a draft, and submit it with our litigation package. It is referred to the [88] Department of Justice. It would have been drafted sometime during the month of December, 1977.

Q. And, it would have been forwarded to Justice when?

A. It was formally referred to Justice on February 3rd, '78.

Q. And, let me ask you, prior to that referral to Justice in February of 1978, was it your intention to use any aerial photographs of the Midland Facility as direct evidence in an enforcement action against Dow?

A. Yes.

Q. Has your mind changed since that time about the value of these photographs as evidentiary value of these photographs in an enforcement action?

A. The value of the photographs that had been taken, or have been taken, the photographs don't meet some of the purposes to which aerial photography would. We didn't get pictures of plumbs, that sort of thing. We did get a good view of the relationship of the facilities to each other and their surroundings, and the surrounding scene.

* * *

JAMES O. McDONALD (EPA)
DEPOSITION EXHIBIT 1, 11/2/78

DIST. CT. DKT. 27

REGION V

FEB 3 1978

Aerial Photographs of Two Dow Chemical Corporation Boiler Plants and One Incinerator Plant at Midland, Michigan

James O. McDonald, Director
Enforcement Division

Dr. Dave McNelis, Director
Remote Sensing Division
Environmental Monitoring and Support Laboratory

This is to request aerial reconnaissance photographs of the facilities identified as (1) West Power, (2) South Power, (3) Incinerator, on the attached portion of the United States Department of Interior Geological Survey Map, Midland South, Michigan.

The Agency's objective is to use these photographs to support pending litigation. The purpose of these photographs is to visualize the emissions and to obtain perspectives of the facilities and their surroundings which cannot be obtained by other means.

We cannot predict when there will be excessive visible emissions from these sources. We feel that early morning or late afternoon are the opportune times for seeing emissions from coal burning.

In any event, we feel the photographs will provide valuable support for our enforcement efforts. Time is a significant factor, and we feel that we should have them by February 13, 1978, if it is at all possible. Please notify us no less than 48 hours in advance of your planned sur-

veillance, so that we, in turn, can notify the Company and the State air authorities, as we are required by the Clean Air Act. If you have any questions, please call Mr. William E. Beyer of the staff at (312)-353-2086.

ORIGINAL SIGNED BY
/s/ James O. McDonald

Attachment

• • •

DEFENDANT'S (EPA's) ANSWERS TO PLAINTIFF'S (DOW's) FIRST INTERROGATORIES

DIST. CT. DKT. 22 — FILED 6/29/78

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
NORTHERN DIVISION

[*Caption Not Printed*]

* * *

Interrogatory No. 2
Please state whether the defendant or anyone acting upon his behalf has taken or has caused to be taken any photographs, aerial or otherwise, of any of plaintiff's manufacturing facilities.

Answer No. 2
Yes. The only photographs taken of Dow's Midland facilities at the request of EPA were taken by Abrams Aerial Survey in February, 1978. For further information, see Answer to Interrogatory No. 4.

* * *

Interrogatory No. 4
At any time, did the defendant or anyone acting in concert with the defendant contract or hire or otherwise

direct Abrams Aerial Survey Corporation or any other person to photograph Dow's Midland, Michigan production facilities?

Answer No. 4
Yes.

* * *

Interrogatory No. 6
Was the film used by the defendant, or at the defendant's direction in the taking of photographs of any of plaintiff's manufacturing facilities at Midland Michigan, processed or developed?

Answer No. 6
Yes.

Interrogatory No. 7
If the answer to No. 6 is in the affirmative, were any prints made from the negatives?

Answer No. 7
Yes.

Interrogatory No. 8
If your answer [sic] to No. 6 and 7 are in the affirmative, please identify by whom such processing, development and printing was undertaken, the date, and the place of such processing, developing and printing. Please describe how many copies of each and every photograph so taken and processed were made, and identify the present whereabouts of each and every photograph.

Answer No. 8
a) Jimmy Hampton of the EPA Environmental Monitoring and Support Laboratory-Las Vegas processed the film on February 8, 1978 and printed 3 sets of color contact prints. On February 9, 1978, Bill Fowler produced test prints and five sets of color enlargements from 10 negatives in Las Vegas. All contact prints, and enlargements

and test prints are now in the possession of the Clerk of the United States District Court, Eastern District of Michigan, Northern Division. (b) Photographs and portions of photographs given to Dow Corning by agreement of the parties to this action are presumably still in Dow Corning's possession.

* * *

Interrogatory No. 20
Was the Michigan State Air Pollution Control Commission, its staff, the Michigan Department of Natural Resources, the Attorney General of the State of Michigan or any other agency of the State of Michigan, notified or in any other way involved with the photographing of the plaintiff's production facilities at Midland, Michigan?

Answer No. 20
No.

* * *

Interrogatory No. 39
If the aerial photographing of the plaintiff's Midland, Michigan production facilities was pursuant to an enforcement action under the Clean Air Act, (42 U.S.C. 1857c-9), please identify which portion of the plaintiff's production facility at Midland, Michigan, was the subject of such inquiry.

Answer No. 39
The aerial photography was taken in connection with an enforcement action against the Dow Chemical Company, which action would be brought under 42 U.S.C. § 7413 (formerly 42 U.S.C. § 1857c-8); the incinerator and the West side and South side power plants were the subject of such inquiry.

* * *

Interrogatory No. 47
Has anyone with experience in photographic analysis, photographic enhancement, or photographic reconnaissance examined or viewed any of the photographs described in your answer to any of the preceding interrogatories?

Answer No. 47
Yes.

* * *

• • •

AFFIDAVIT OF CLAYTON E. LAKE (EPA) DATED 6/10/81, IN SUPPORT OF U.S.'s RESPONSE TO DOW's OPPOSITION TO U.S.'s MOTION FOR SUMMARY JUDGMENT FILED 10/13/81

DIST. CT. DKT. 187

Clayton E. Lake, being duly sworn, deposes and says:

THAT I am employed by the U.S. Environmental Protection Agency, Environmental Monitoring Systems Laboratory-Las Vegas, Nevada (hereafter EMSL-LV) in the capacity as Project Manager in the Advanced Monitoring Systems Branch (AMS) (formerly, Remote Sensing Operations Branch, RSO.)

THAT a copy of the letter requesting EMSL-LV for photographic support of facilities in Midland, Michigan was received by me from Mr. James O. McDonald, Director, Enforcement Division, EPA Region V, via telefax on Friday, February 3, 1978.

THAT on Monday, February 6, 1978 I received bids via telephone for cost of data collection. Abrams Aerial Survey (hereafter Abrams) located in Lansing, Michigan was awarded the contract on this date.

THAT I requested Abrams verbally to return flight maps, flight cards and exposed film via air baggage to EMSL-LV (AMS) for processing. This is a normal procedure that EMSL-LV (AMS) requests of all its contractors.

THAT on Tuesday, February 7, 1978, Abrams reported to me via telephone that the photogaphic mission was conducted that day from 1415 to 1452 (EST) with film and flight information being shipped via United Airlines small package express, scheduled to arrive in Las Vegas on flight 711 February 8, 1978 at 1135 a.m. (PST).

THAT on Tuesday, February 7, 1978, I completed Form RDS-10 which designated the material as restricted information along with photo lab requirements to be conducted by authorized personnel.

THAT on Wednesday, February 8, 1978 mission film was picked up at the airport by Mr. Jimmy Hampton. He processed and produced color contact prints giving film, prints, flight card and map to me as a normal procedure, on that date.

THAT on Thursday, February 9, 1978, Bill Fowler produced five sets of color enlargements from ten negatives. It is a normal procedure to send the requesting Region three sets of enlargements. EMSL-LV (AMS) maintains any extra sets in its locked files.

THAT on Friday, February 10, 1978 data information blocks giving time, scale, sites and north arrows were mounted on enlargements and I sent the package to EPA Region V via TWA "Next Flight Out", flight 780, for Mr. William Beyer to pick up at the airport.

THAT mission film and extra prints were placed in a locked secure metal cabinet by me and I maintained the only key, thus restricting access to data. No one received the key from me, to enter the cabinet, during the time this data was at EMSL-LV.

THAT on Monday, April 10, 1978, I sent mission film and enlargements via Certified Restricted Mail to Mr. Thomas Woods, Assistant U.S. Attorney in Detroit, Michigan, in response to the request of Mr. Mike Smith of EPA, Region V.

THAT on Thursday, April 13, 1978 I sent all originals and copies of the original maps and flight information provided by Abrams via Certified Restricted Mail to Mr. Thomas Woods, Assistant U.S. Attorney, Detroit, Michigan, purging EMSL-LV files of said materials and information. This action was in response to the request of Mr. Mike Smith of EPA Region V.

THAT on July 13, 1978, I discovered a roll of contact prints in a drawer of the locked secure metal cabinet, that I had inadvertently overlooked during my April 10, 1978 search for pertinent materials. That, further, I immediately notified Dorothy Attermeyer, Office of Regional Counsel, EPA Region V regarding my oversight and sent the material via Certified Restricted Mail directly to Mr. Thomas Woods, Assistant U.S. Attorney, Detroit, Michigan, finally purging EMSL-LV files of all related materials and information. During this period, I remained the sole possessor of the key to the cabinet and no one received the key from me to gain access.

Further Affiant says naught.

/s/ Clayton E. Lake

[*Jurat Not Printed*]

CLAYTON E. LAKE (EPA)
DEPOSITION EXCERPTS 2/7/79

DIST. CT. DKT. 41

* * *

[29] * * * Q. And after you had made a determination that Abrams would be able to conduct the overflight, what directions did you give them for undertaking that work for you?

A. I first gave them about three different altitudes to fly over.

Q. And, what were those altitudes?

A. 1,200 above ground, 3,000 and 12,000.

Q. And, did you give them any directions as to the type of camera or film that they should use?

A. Right. We wanted color film.

Q. Did you make any specification as to the type of camera that they would use?

A. We requested either Zeiss, Wild, or a camera equal to their specs.

Q. Why would you want to utilize that [30] particular type of camera?

A. Some of those small companies have old antique cameras, which does not give you good color rendition, so we request this type of camera, which does give you fairly good color.

Q. Was there a reason that you were particularly interested in color?

A. We always seem to determine more from a color photograph. It is just easier to study.

Q. Did you make any — did you specify to Abrams what type of film they should use?

A. I believe I did. I think that is on our — it would be on our purchase order, color film.

Q. This form right here (indicating)?

A. Yes, right there, color film. All they had in stock was 2445. I told them they could use that.

Q. This is, for the record, Lake Deposition Exhibit No. 2N. On that exhibit you indicate, and maybe you can refer to your copy of it, and correct me if I am wrong, you indicate there a description of the job. "Collect aerial photographic data only, of three industrial sites in Midland, [31] Michigan for support in pending litigation. Approximately 53 exposures of vertical and obliques will be required at two different altitudes using Zeiss, Wild or 6 inch FL aerial mapping camera with equal resolution and aerial color film. Film to be returned to Las Vegas via airline ticket counter to ticket counter for processes." Is there a distinction between a Zeiss and a Wild camera?

A. They are both very similar. There is differences, but not much difference.

Q. Are you familiar with those cameras?

A. Yes, sir, I am.

Q. Are they capable of high resolution photography?

A. The manufacturers say that they have between 40 and 45 lines.

Q. What does that translate out to you, as far as the definition of photographs?

A. Also, you have a lot of variance. You have atmospheric conditions, you have a large variance. The numbers they give you is run off a test bench, which they give you these lines, which is average resolution.

[32] Q. What does that resolution figure mean to you as a photographer, if you see that number? What does it mean to you, as far as the capability of the camera to take high resolution film?

A. That would be a good aerial mapping camera.

Q. Do you, in fact, know what type of camera Abrams used to secure the photographs of the Dow Plant?

A. They told me they had an RC-10.

Q. What is an RC-10?

A. RC-10 is the same as RC-8, except you can change the lens.

* * *

Q. What is an RC-10 used for?

A. Aerial mapping, mainly, topographic.

* * *

[66] * * * Q. And, after you received the film here — it was received in Las Vegas?

A. Yes, sir.

Q. By what manner?

A. It came by — it seems like it was United. It came baggage to baggage.

Q. Air Freight?

A. Not really Air Freight. It is handled like baggage.

* * *

[67] * * * Q. Did you participate in the processing of the film?

A. No, sir.

Q. And, after the film was processed, did you then view the film?

A. Yes, sir.

Q. And certain enlargements of that film were prepared, were they not?

A. Yes, sir.

* * *

LAKE DEPOSITION EXHIBIT 2D

2 × Enlargements of the following

Frame	*Enlargement scale*	*Time*	*Sites*
9471	1″ = 1000′	2:16 p.m.	Dow Chemical Facilities
9478	1″ = 250′	2:26	West Power Plant
9481	1″ = 250′	2:30	South Power Plant
9500	oblique	2:31	Dow Chemical Facilities
9507	1″ = 100′	2:45	West Power Plant
9518	1″ = 100′	2:47	Incinerator
9527	1″ = 100′	2:50	South Power Plant
9535	oblique	2:51	Incinerator
9537	oblique	2:52	West Power Plant
9541	oblique	2:53	South Power Plant

Total 50

LAKE DEPOSITION EXHIBIT 2E

6" FL lens (50397, 48, or 2445)
60% forward overlap RSD 7816

Flight Line	*length*	*width/ coverage*	*alt/AGL*	*scale*	*frames*
Vert. 1	3 miles	4,500'	3,000	1" = 500'	9
Vert. 2	3 miles	4,500'	3,000	1" = 500'	9
overall (oblique)	roll aircraft		approx. 3,000		2
Vert. Facility #1	1 mile	1350'	1200'	1" = 200'	9
Vert. Facility #2	1 mile	1350'	1200'	1" = 200'	9
Vert. Facility #3	1 mile	1350'	1200'	1" = 200'	9
(fly aircraft slow as possible for image motion)					
Oblique Facility #1		approx 1200' AGL			2
Oblique Facility #2		approx 1200' AGL			2
Oblique Facility #3		approx 1200' AGL			2
					53 frames

(1) 5 Ft unexposed film on each end for control strip

(2) Record emulsion number of film, photographers and pilots name, flight log & map.

2445

LAKE DEPOSITION EXHIBIT 2G

TECHNICAL SERVICES REPORT

(Read instructions on reverse before completing form)

1. *LABORATORY PERFORMING PROJECT:* EMSL-LV
2. *PROJECT NO.:* RSD 7818
3. *LOCATION OF* Activity: Midland, MI V
4. *TYPE OF* Activity: Remote Sensing
5. *REQUESTER:* James McDonald
   Director, Enforcement Division
6. *OBJECTIVES:*
   Collect aerial photographic data of three industrial sites in Dow Chemical facilities located in Midland, Michigan (West Power, South Power and Incinerator).

   The data is to visualize the emissions and to obtain perspectives of the facilities and their surroundings.

   Mission data to be used as support in pending litigation.
7. *DELIVERABLES:*
   1. Flight Report.
   2. Color oblique and vertical photographic coverage.
   3. Assistance in photo interprtation [*sic*] (Limited due to snow coverage).
   4. Final delivery shipped Feb. 10, 1978.
8. *Staff-Hours:* 15
9. *COSTS:*
   MATERIAL: $254.00 *TRAVEL:* _____
   Contract: $2,078.44
10. *Date Request:* 2/3/78 11. *Date delivered:* 2/10/78
12. *P.E. No.:* 1HD622 13. Major Equipment Utilized
14. *REMARKS:* Project Completion Report with Actual Cost.
15. *PREPARED BY:* /s/ Clayton E. Lake
16. *DATE:* 3/7/78

EPA Form 5340-1 (77) Revised

AFFIDAVIT OF THOMAS M. SCHAFER (ABRAMS AERIAL, INC.), ATTACHED TO COMPLAINT FILED 3/15/78

DIST. CT. DKT. 3

THOMAS M. SCHAFER, being duly sworn, deposes and says:

THAT he is employed by Abrams Aerial Survey Corporation, Lansing, Michigan, in the capacity of Vice President of contracting;

THAT Abrams Aerial Survey Corporation (hereafter Abrams) is engaged primarily in the business of aerial mapping and aerial photography;

THAT Affiant is familiar with the technology, methods and business practices of Abrams in said aerial mapping and photography;

THAT on February 6, 1978, Abrams received an order for services by telephone from Clayton Lake, an employee of the United States Environmental Protection Agency (hereafter EPA), Las Vegas, Nevada office, for EPA purchase order CB-8-0189-A;

THAT said purchase order placed with Abrams by EPA directed Abrams to take aerial photographs of the Michigan Division, Midland plant of The Dow Chemical Company located at Midland, Michigan as soon as business schedules and weather conditions would permit;

THAT said EPA purchase order directed that said aerial photographs be taken from an oblique perspective at altitudes of 3,000 and 1,200 feet from the west side looking to the east of said Midland plant and from the northwest side looking to the southeast of said Midland plant;

THAT said EPA purchase order also directed that vertical flight lines at altitudes of 12,000, 3,000 and 1,200 feet be flown over said Midland plant;

THAT it is impossible for Affiant to specify the particular flight lines due to the fact that the EPA purchase order directed Abrams to furnish all original aerial negatives, the flight data card for the job executing said purchase order and the flight map of same which items would, in the ordinary course of business, have all been retained by Abrams;

THAT Affiant is informed that on February 7, 1978, at approximately 3:00 p.m., one Michael Mills, an employee of Abrams, in a twin engine Beechcraft airplane, flew over the area of said Midland plant located at Midland, Michigan, and with a Wild RC-10 certified mapping camera with 6-inch lens, having a focal length of approximately 150 millimeters, piloted said plane while one Richard Miller took approximately 100 exposures on Kodak aerocolor negative film #2445 in accordance with the instructions given by said Clayton Lake;

THAT upon landing in accordance with the instructions of said purchase order, employees of Abrams placed the exposed film in a closed container and transmitted same together with the aforesaid flight data card and flight map to the United States Environmental Protection Agency, Las Vegas, Nevada at P. O. Box 15027 on a United Airlines flight;

THAT based on Affiant's knowledge of aerial photographs, techniques, methods and processes, aerial negatives taken from a vertical perspective at approximately 1,200 feet with the aforesaid equipment and film is capable in the hands of a competent photographic technician, of enlargement to a scale of approximately 1 inch equals 20 feet without significant loss of resolution;

THAT based on Affiant's knowledge of aerial photographs, techniques, methods and processes, aerial negatives taken from a vertical perspective at approximately

3,000 feet with the aforesaid equipment and film is capable in the hands of a competent photographic technician, of enlargment to a scale of approximately 1 inch equals 50 feet without significant loss of resolution;

THAT based upon Affiant's knowledge of aerial photographs, techniques, methods and processes, aerial negatives taken from a vertical perspective at approximately 12,000 feet with the aforesaid equipment and film is capable in the hands of a competent photographic technician, of enlargement to a scale of approximately 1 inch equals 400 feet without significant loss of resolution.

Further Affiant says naught.

/s/ THOMAS M. SCHAFER

[*Jurat Not Printed*]

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CLAYTON LAKE (EPA)
DEPOSITION EXCERPT 7/14/81

DIST. CT. DKT. 253

* * *

[49] * * * Q. Mr. Lake, back to your document here, the publication that we have been referencing in the deposition, the Lake Deposition Exhibit No. 1, would you look at Page 10, please, where we talked about aerial cameras. In the second full paragraph you reference RC-8, RC-10 Zeiss, or equivalent cameras. And over on Page 11 you say about the third line down:

"Mapping cameras are particularly desirable because geographic distortion is minimal."

What do you mean by that? Can you say, do you know what that means?

A. Like these are using mapping cameras and you have very small distortion. Unlike some cameras where on the edge of the frame it is going to be really stretched out of proportion, maybe oblong or something of that nature, and your mapping [50] cameras are not stretching out of proportion, it's pretty much distortion-free and helps with your interpretation.

Q. If I take my camera, my hand held Brownie or Polaroid camera, would that distortion element be introduced there as a factor —

A. I don't know which camera you would be using.

Q. Would the ability of a mapping camera to take photographs with minimal geometric distortion be superior to a camera that the average person might use?

A. May not have as good a resolution of some of your other cameras.

MR. ALLEN: What kind of cameras are we talking about here? We have run the gamut from an Instamatic to a Hasselblad.

* * *

Q. (BY MR. GLEESON) If you were using or you were going to take an aerial photograph for your purposes, would you prefer a mapping camera to the type of camera Mr. Allen was discussing?

A. Some of your smaller cameras have better resolution or may be sharper.

Q. How about that geometric distortion?

A. Your mapping camera is better for that, what they use for making maps, a better camera for measurement.

* * *

[80] * * * Q. Now, you talked about the problem of distortion, the ability of an aerial mapping camera for distortion. What type of distortion were you talking about?

A. You have optical distortion with every lens you have, a certain optical distortion, and your mapping cameras are pretty well calibrated and ground to have less distortion than your regular cameras.

* * *

[81] * * * Q. You said something about hand held cameras offering better resolution or comparable resolution to an aerial camera. What did you mean by that?

A. Some of your cameras will actually be able to resolve more information that is on the ground than what your aerial mapping camera would. The disadvantage would be as far as doing measurements. You could do measurements with it but would be a little more difficult than your regular mapping camera.

Q. What kind of cameras are you talking about here? 35 millimeter?

A. Can either use 35 millimeter or 70 millimeter.

Q. With what kind of lens? With the 70, a standard lens?

A. Some would be commercial right off the shelf.

Q. And using any special kind of film?

A. We are just using any commercial film ourselves, and anyone can purchase it, the commercial film.

Q. If all you are interested in is picking up precise [82] detail of an object on the ground using aerial photography and your objective is getting as much detail and resolution that you are able to pick up, what would be the better sort of camera to use for that?

A. I would probably use either a Nikon, Hasselblad and a telephoto lens in a helicopter.

Q. As opposed to an aerial mapping camera?

A. If you're going for detail.

Q. But for topographical measurements and relationships?

A. I would use a mapping camera.

* * *

[84] * * * Q. So is it your testimony, Mr. Lake, just jumping back to the question of aerial photography, that you can obtain comparable results as far as detail is concerned using a hand held 35 millimeter or 70 millimeter camera as with an aerial camera such as the RC-10?

A. Correct, and in some cases you would have better resolutions with a hand held camera because at least with a helicopter you can fly at lower altitudes and still be under FAA regulations where in fixed wing aircraft you have to fly at higher altitude.

MR. ALLEN: Okay. I have no further questions.

FURTHER EXAMINATION

BY MS. GOOTEE:

Q. Mr. Lake, if the purpose of the aerial photography mission was to obtain the best data so that you could make measurements and plot what was on the ground, would you use a mapping camera or one of your hand held cameras?

A. Like I mentioned before, we are mainly set up — [85] now, I feel we are getting nit-picky on detail. We are mainly set up — we are not trying to pick a little two inch object on the ground. We are trying to mainly photograph an area and see if it does comply with certain regulations that does [*sic*] exist on the books.

So we are set up mainly for aerial mapping. All of our equipment is designed for aerial type film and with the hand held cameras we have on stock, have a much shorter focal length, and when we contract work I would doubt very seriously if Abrams would have a hand held camera either, so — when you contract a mapping company for that you give them coordinates and you have them fly the coordinates for you.

Q. Did I hear you say you are not really interested in detail?

A. We are interested in detail, but I thought we were getting too nit-picky when talking about very small items. Flying at 1,200 feet above ground you are using a 6-inch lens. We never are required to have any more detail than that. In most cases we are very happy with one square inch or 500 feet to the inch, in most cases.

Q. And if that is good enough and the hand held 35 or 70 millimeter cameras give you good resolution, why don't you use the cheaper camera then?

A. Because we are set up — it is easier for us since [86] we are set up for vertical aerial mapping like our printers — we have aerial printers and our cameras are aerial cameras. * * *

. . . plus we find it takes less film, less exposure, less time in doing our type of work, doing the aerial mapping, because if you are using 70 or 35 millimeter film, you are going to have millions of frames to look through and trying to look through those little frames under the stereo table, what we have, wouldn't be feasible and really for us is more cost effective using the nine inch mapping camera.

* * *

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AFFIDAVIT OF WILLIAM E. BEYER (EPA) DATED 6/15/81, IN SUPPORT OF U.S.'s RESPONSE TO DOW's OPPOSITION TO U.S.'s MOTION FOR SUMMARY JUDGMENT FILED 10/13/81

DIST. CT. DKT. 187

1. My name is WILLIAM E. BEYER. I am an environmental engineer for the United States Environmental Protection Agency, Enforcement Division in Region V. In 1977, I was assigned to investigate the compliance status of the Dow Chemical Company facilities in Midland, Michigan with the Michigan implementation plan approved under the Clean Air Act.

2. I picked up the photographs of the Dow facilities that had been ordered by Region V from the Environmental Monitoring Laboratory in Las Vegas at the freight terminal at O'Hare airport on February 10, 1978. I brought them to my office where I kept them either on the floor or on the heating duct near my desk. I gave the enlargements to Steve Rothblatt within a week after receiving them and retained the rolls for a longer time, perhaps four weeks altogether. I turned the rolls over to the docket clerk on or about March 13, 1978.

3. During the time that the photos were in my office they were viewed by several EPA enforcement personnel. They were not examined by anyone outside the Agency in my presence and, to my knowledge, were not examined by anyone outside the Agency in my absence.

Further affiant sayeth not.

DATE: June 15, 1981 /s/ William E. Beyer

[*Jurat Not Printed*]

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AFFIDAVIT OF STEPHEN H. ROTHBLATT (EPA) DATED 6/15/81, IN SUPPORT OF U.S.'s RESPONSE TO DOW's OPPOSITION TO U.S.'s MOTION FOR SUMMARY JUDGMENT FILED 10/13/81

DIST. CT. DKT. 187

1. My name is STEPHEN H. ROTHBLATT. I am a manager for the United States Environmental Protection Agency in Region V. I was chief of the Engineering Section of the Air Enforcement Branch in the Enforcement Division during the time that EPA had photographs taken of the Dow Chemical Company facilities in Midland, Michigan.

2. On or about February 13, 1978, William Beyer transferred some enlargements of the Dow photos to me. There were two very large photographs of the boiler plants taken from both an overhead and an oblique viewpoint which I hung on the wall of my office. The remaining enlargements I kept on my desk or on a table in my office. On or about March 13, 1978, I transferred the enlargements to the docket clerk.

3. During the time that the photos were in my office they were viewed by several EPA enforcement personnel. They were not examined by anyone outside the Agency in my presence, and, to my knowledge, were not examined by anyone outside the Agency in my absence.

Further affiant sayeth not.

DATE: June 15, 1981 /s/ Stephen H. Rothblatt

[Jurat Not Printed]

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AFFIDAVIT OF H. V. (JACK) WAIT, JR. (DOW) DATED 7/30/81, IN SUPPORT OF DOW'S REPLY RE SUMMARY JUDGMENT FILED 8/17/81

DIST. CT. DKT. 168

H. V. (Jack) Wait, Jr., being duly sworn, deposes and says:

THAT I am the Section Manager, Chlor-Alkali/Brine Chemicals, of the Michigan Division of The Dow Chemical Company.

THAT I have examined the EPA photographs of Dow's Midland facility, which photographs are the subject matter of *Dow* v. *EPA, et al,* Case No. 78-10044, under magnification.

THAT during such examination I have discerned items or equipment as small as ½ inch in diameter in the EPA photographs

Further Affiant says naught.

/s/ H. V. (Jack) Wait, Jr.

[*Jurat Not Printed*]

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AFFIDAVIT OF SHERMAN HOLLANDER (MICH. DNR) DATED 8/4/81, IN SUPPORT OF DOW's REPLY TO U.S.'s OPPOSITION TO DOW's MOTION FOR SUMMARY JUDGMENT FILED 8/17/81

DIST. CT. DKT. 168

SHERMAN HOLLANDER, being duly sworn, deposes and says:

THAT I am employed by the Michigan Department of Natural Resources (DNR) Division of Land Resource Programs.

THAT I have access to and control over DNR aerial photographs.

THAT I sent a 10 × 10 inch color infrared transparency of frames 81-66-172 and 80-65-35 to Clayton E. Lake of Las Vegas, Nevada, in May of 1981.

THAT frames 81-66-172 and 80-65-35 were taken at an attitude [*sic*] of 12,000 feet, at a vertical angle and at a contact scale of 1:24,000 (equivalent to 1 in. = 2000 ft.).

Further Affiant says naught.

/s/ Sherman Hollander

[*Jurat Not Printed*]

AFFIDAVIT OF MICHAEL KELYMAN (DOW)
ATTACHED TO COMPLAINT FILED 3/15/78

DIST. CT. DKT. 2

MICHAEL (NMI) KELYMAN, being duly sworn, deposes and states:

THAT he received a Bachelor of Science Degree in Metallurgical Engineering in 1956 and a Master of Science Degree in Industrial Management in 1957, both from Purdue University;

THAT he was employed by The Dow Chemical Company (DOW) on May 5, 1958 and has been a full-time employee since that date;

THAT he has had experience in various capacities including Manager of Safety for the Michigan Division and, most recently, was appointed Manager of Security and Plant Protection for the Michigan Division of Dow Chemical U.S.A., an operating unit of DOW;

THAT he is directly responsible for the security of the Midland production facility of the Michigan Division;

THAT about one hundred employees are directly involved in maintaining the security of the Midland production facility;

THAT he is especially responsible for the security and protection against unauthorized disclosure of DOW's proprietary process technologies which are being employed in the Midland production facility;

THAT in securing the Midland production facility to guard against losing any proprietary process technology, the following several precautions are being taken:

1. A chain-link fence at least 8 feet high has been installed completely around the production facility;

2. gates for ingress and egress at various intervals in the fence have an attendant (guard) on duty when any given gate is in operation to admit or allow people to leave the facility;

3. closed-circuit television surveillance for continuously monitoring the various entrance and exit gates and to monitor the area along the fence surrounding the facility;

4. alarm systems which will indicate unauthorized entry at various locations;

5. motion detectors at strategic locations to indicate movement of personnel in certain restricted areas within the facility;

6. roving patrols which travel throughout the facility and around the perimeter to augment the other security systems;

7. liaison with local public law enforcement officials including radio communication to assist in the apprehension of persons engaged in unlawful activities relating to the production facility;

8. employees entering the facility must exhibit an identification badge in every instance of entry;

9. non-employees who wish to visit the facility must be approved and must obtain a visitors pass including a badge which must be exhibited at all times while in the facility;

10. non-employees who have been approved to visit are still greatly restricted in their movements and some areas of the facility remain off-limits to all non-employees;

11. cameras by anyone other than an authorized representative of DOW are prohibited at all times and in all places in the facility; and

12. persons visiting for technical reasons must obtain a technical pass which provides among other things that the visitor will not disclose any technical information learned as an incidence to his visit;

THAT security personnel are on duty twenty-four hours a day and seven days a week with at least twenty-five such people on duty at all times and with about fifty people on duty during normal duty hours;

THAT DOW spent at least about 3.25 million dollars in each of the last ten years on the security of the Midland production facility; and

THAT in the event the engineering drawings and/or blueprints of a specific production plant were to be disposed of, for example, at the conclusion of construction, the drawings and/or blueprints would be packaged and incinerated under the direction of security personnel who would also witness the incineration.

FURTHER Affiant sayeth naught.

/s/ Michael (NMI) Kelyman

[Jurat Not Printed]

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AFFIDAVIT OF LEROY L. MASTIC, JR. (DOW)
ATTACHED TO COMPLAINT FILED 3/15/78

DIST. CT. DKT. 4

LEROY L. MASTIC, JR., being duly sworn, deposes and states:

THAT he received Bachelor of Science degrees in Mathematics and Chemical Engineering in 1954 and a Master of Science degree in Chemical Engineering in

1955 from the University of Michigan, is a Professional Engineer licensed by the State of Michigan and a member of the American Institute of Chemical Engineers;

THAT from 1955 to 1957 he served in the United States Army in a medical research facility doing work involving the irradiation of biological systems;

THAT he has since 1957 been employed by The Dow Chemical Company in various manufacturing capacities relating to the production of hydrocarbons and monomers and of polyvinylic resins;

THAT since 1973 he has been employed by The Dow Chemical Company as the Manager of the Organic Chemicals Production Department, Michigan Division, Midland, Michigan;

THAT in said capacity he has supervisory authority over the operation of a number of organic chemical production facilities located in said Michigan Division Midland plant, one of which is a production facility for the production of chlorinated benzenes;

THAT in said capacity he is intimately familiar with the process, equipment, design and technology incorporated in said chlorinated benzenes (CB) production facility and with other processes, equipment and technology employed commercially and taught in published literature pertaining to the production of CB;

THAT the aforesaid CB production facility includes a new production segment which just became operational in late 1977 and which new segment incorporates a newly developed process and technology for which process research and development costs incurred by The Dow Chemical Company over the last ten (10) years, are in excess of one and a half million dollars ($1,500,000);

THAT said newly developed process and technology permit The Dow Chemical Company to selectively produce the chlorinated benzenes;

THAT with respect to said newly developed process and technology, Affiant knows of no disclosure of same in the published literature nor of disclosure of same by The Dow Chemical Company to other than its employees, and believes that same is unique to The Dow Chemical Company Midland plant;

THAT Affiant is informed that on or about February 7, 1978, aerial photographs of said Michigan Division Midland plant, including the aforesaid CB production facility, were taken without authorization of The Dow Chemical Company by employees of Abrams Aerial Survey Corporation and which photographs are capable of enlargement and printing to show the area photographed on a scale of one (1) inch to twenty (20) feet;

THAT to the best of Affiant's knowledge, other than said February 7, 1978, episode of aerial photography the only other instances in which the Michigan Division Midland plant or portions thereof have been photographed from the air have been instances where The Dow Chemical Company has authorized such photography for its own use or benefit and on that basis Affiant, prior to February 7, 1978, had no reason to believe that unauthorized aerial photographs of said Midland plant or said CB production facility would be taken;

THAT based on the belief that no unauthorized aerial photographs would be taken of the aforesaid new segment it has, primarily for reasons of safety due to the explosive and toxic nature of the process reactants, been constructed in a manner which reveals various reactor equipment, loading and storage facilities, transfer lines,

motors and like equipment to view from an aerial perspective since same have not been enclosed within building structures;

THAT because of the location of said CB production facility well behind an eight (8) foot chain link fence surrounding the perimeter of the Michigan Division Midland plant, among and behind various other production facilities and buildings, the details of said new production segment which would be visible from an aerial perspective are not visible from outside said perimeter fence;

THAT Affiant is informed that at least twenty (20) other production facilities within the Midland plant are similarly constructed so that details of such production facilities would be visible from an aerial perspective which are not visible from outside said perimeter fence;

THAT at the Michigan Division Midland plant, The Dow Chemical Company exercises numerous general security measures such as restricting physical access thereto to authorized personnel only;

THAT with respect to said CB production facility under Affiant's supervision, supervisory salaried employees having access to same are required, upon hiring, to execute an agreement to maintain in confidence all trade secret or confidential technical or business of The Dow Chemical Company to which they have access and upon termination of employment are "debriefed" and reminded of their obligation with respect to specific technology to which they have had access;

THAT access to internal written report, engineering plans, blueprints, diagrams and operating manuals pertaining to said CB production facility is tightly limited and is restricted to those employees of The Dow Chemi-

cal Company having need for such items in the performance of their duties;

THAT technical visitors other than employees or contractors of The Dow Chemical Company are not routinely permitted access to said CB production facility and in instances when such access is granted, it is upon Affiant's authorization and issuance of a visitor pass to such an individual who is then accompanied by an employee of The Dow Chemical Company;

THAT such a technical visitor is not exposed to any equipment or technology contained in said CB production facility unless Affiant first determines that such exposure is required for business purposes of The Dow Chemical Company and that the visitor agrees to maintain in confidence any information pertaining to the facility which he may obtain by virtue of his visit;

THAT no photographs of said CB production facility are permitted from within the Midland plant without Affiant's authorization and then only for the use or benefit of The Dow Chemical Company;

THAT on information and belief and Affiant's experience as a chemical engineer, aerial photographs enlarged to the scale of one (1) inch to about one hundred (100) feet would reveal the unique feature of said CB production facility to a competent chemical engineer could deduce the purpose of and results obtained from such a feature and the attendent necessary modifications in a CB production process;

THAT aerial photographs enlarged to the scale of one (1) inch to fifty (50) feet or less of said CB production facility, in the hands of a competent chemical engineer, would be capable of use as an engineering diagram or blueprint for construction of a major portion of said CB production facility which would obviate the necessity to

incur most research and development and engineering costs for a like facility;

THAT without such aerial photographs Affiant believes that the process and technology incorporated in said CB production facility could not be reproduced by competitors technically skilled in the CB process art without considerable expense and effort, at least as great as that expended by The Dow Chemical Company to develop same;

THAT because of controlled selectivity of various members of the CB family which inures to The Dow Chemical Company from use of the unique process and technology incorporated in the Midland plant CB production facility, The Dow Chemical Company now enjoys the ability to adjust its CB product to the demands of the CB market to a much greater extent and in a more economic fashion than competitors who do not possess knowledge of said unique process and technology;

THAT a competitor of The Dow Chemical Company possessing aerial photographs of said CB production facility on the scale of one (1) inch to about one hundred (100) feet would likely and on the scale of one (1) inch to fifty (50) feet or less would certainly, in Affiant's opinion, be capable of employing the same unique process and technology incorporated in said CB production facility and thereby more economically compete with The Dow Chemical Company in the manufacture and sale of chlorinated benzenes, to the inestimable and irreparable damage to the business of The Dow Chemical Company.

Further Affiant says naught.

/s/ LEROY L. MASTIC, JR.

[Jurat Not Printed]

AFFIDAVIT OF ROBERT R. BUMB (DOW)
ATTACHED TO COMPLAINT FILED 3/15/78

DIST. CT. DKT. 5

ROBERT R. BUMB, being duly sworn, deposes and states:

THAT he received a Bachelor of Science degree in Chemistry from Texas Agricultural & Industry University, a Doctor of Philosophy degree in Physical Chemistry from Arizona State University in 1967 and is a member of the American Institute of Physics, the American Chemical Society and the American Crystallography Association;

THAT he has since 1967 been employed by The Dow Chemical Company in various areas involving technology of polymers, including the position of Technical Director for Designed Polymer Research;

THAT he is presently employed by The Dow Chemical Company as Production Manager of the Styrene Plastics Department, Michigan Division, Midland, Michigan, and is responsible for The Dow Chemical Company's manufacturing technology for more than thirty (30) sites world-wide which produce styrene plastics;

THAT he is familiar with The Dow Chemical Company's Michigan Division Midland plant complex located at Midland, Michigan, particularly with production facilities for styrene-acrylonitrile (SAN) resin and acrylonitrile-butadiene-styrene (ABS) resin and with a developmental production facility for styrene based heat resistant plastic (HRP), all located at said Midland plant complex, and the technology and processes incorporated in said facilities;

THAT The Dow Chemical Company became the first commercial producer of styrene resins in the United States forty (40) years ago and has continued to develop

and improve technology for the production of styrene resins ever since;

THAT the aforesaid SAN and ABS resin facilities incorporate styrene resin processing technology developed, at great expense to The Dow Chemical Company, over the past twenty-five (25) years and that expenditures over the past ten (10) years for research and development of styrene resin product and processing technology, some of which recent vintage technology is incorporated in the aforesaid three (3) production facilities, are in excess of fifty million dollars ($50,000,000);

THAT Affiant is informed that on or about February 7, 1978, aerial photographs of said Michigan Division Midland plant, including the aforesaid three (3) production facilities, were taken without authorization of The Dow Chemical Company by employees of Abrams Aerial Survey Corporation and which photographs are capable of enlargement and printing to show the area photographed on a scale of one (1) inch to twenty (20) feet;

THAT to the best of Affiant's knowledge, other than said February 7, 1978, episode of aerial photography the only other instances in which the Michigan Division Midland plant or portions thereof have been photographed from the air have been instances where The Dow Chemical Company has authorized such photography for its own use or benefit and on that basis Affiant, prior to February 7, 1978, had no reason to believe that unauthorized aerial photographs of said Midland plant or the three (3) aforesaid production facilities would be taken;

THAT based on the belief that no unauthorized aerial photographs would be taken of the aforesaid three (3) production facilities, said three (3) production facilities have, primarily for reasons of safety, been constructed

in a manner which reveals various reactor equipment, loading and storage facilities, transfer lines, motors and like equipment to view from an aerial perspective since same have not been enclosed within building structures;

THAT because of the location of said three (3) production facilities well behind an eight (8) foot chain link fence surrounding the perimeter of the Michigan Division Midland plant, among and behind various other production facilities and buildings, the details of said three (3) production facilities which would be visible from an aerial perspective are not visible from outside said perimeter fence;

THAT at the Michigan Division plant, The Dow Chemical Company exercises numerous general security measures such as restricting physical access thereto to authorized personnel only;

THAT the processes and technology employed in said three (3) production facilities has not been offered for sale or licensing to any business enterprise outside of corporations which are members of The Dow Chemical Company's corporate family and in which The Dow Chemical Company is at least an equal partner;

THAT within The Dow Chemical Company, all internal written reports, engineering plans, blueprints, diagrams and operating manuals pertaining to the technology and processes incorporated in said three (3) production facilities are tightly controlled and restricted to employees of The Dow Chemical Company who have need of access to same in the performance of their employment;

THAT with respect to said three (3) production facilities which are under Affiant's supervision, employees having access to same are required, upon hiring, to execute an agreement to maintain in confidence all trade secret or confidential technical or business infor-

mation of The Dow Chemical Company to which they have access and upon termination of employment are "debriefed" and reminded of their obligation with respect to specific technology to which they have had access;

THAT technical visitors other than employees or contractors of The Dow Chemical Company are not routinely permitted access to said three (3) production facilities and in instances when such access is granted, it is upon Affiant's authorization and issuance of a visitor pass to such an individual who is then accompanied by an employee of The Dow Chemical Company;

THAT such a technical visitor is not exposed to any equipment or technology contained in said three (3) production facilities unless Affiant first determines that such exposure is required for business purposes of The Dow Chemical Company and that the visitor agrees to maintain in confidence any information pertaining to the facility which he may obtain by virtue of his visit;

THAT no photographs of said three (3) production facilities are permitted from within the Midland plant without Affiant's authorization and then only for the use or benefit of The Dow Chemical Company;

THAT based on Affiant's familiarity with engineering diagrams, plans and blueprints which are ordinarily drawn to scale, aerial photographs enlarged to the scale of one (1) inch to about one hundred (100) feet would reveal the configuration of equipment, height and width of storage tanks and reaction vessels, approximate diameter of pipes, sequence of reactor connections (if any), points of feed, control instrument locations and capacity of loading and storage facilities;

THAT from aerial photographs enlarged to the scale of one (1) inch to about fifty (50) feet or less the size of motors and drives, types of control instrument employed,

position and type of agitation used in reactors, and like detailed information concerning process equipment would be revealed;

THAT given such information revealed by a one (1) inch to fifty (50) feet scale aerial photograph, a competent chemical engineer, using basic engineering calculations, could determine with reasonable accuracy the type of styrene resin process being employed, the solids levels and viscosity levels of the materials being handled, the overall through-put rate and manufacturing costs which information would be particularly valuable to a competitor of The Dow Chemical Company, relative to its own position and would enable such a competitor to obtain a competitive advantage with respect to pricing of competing products in such a competitor's product line;

THAT to the best of Affiant's knowledge, no accurate publication of information regarding said three (3) production facilities in the precision and detail revealed by aerial photographs of the scale one (1) inch to about one hundred (100) feet or less has occurred to date;

THAT Affiant believes that the processes and technology incorporated in said three (3) production facilities could not be reproduced by competitors technically skilled in the styrene resin art without such aerial photographs and without considerable expense and effort, at least as great as that expended by The Dow Chemical Company to develop same;

THAT because of possession by The Dow Chemical Company of information regarding the processes and technology incorporated in said three (3) production facilities, styrene resins produced thereby enjoy a cost advantage, superior product consistency and superior processability over styrene resins of like nature produced by its competitors;

THAT possession of aerial photographs of said three (3) production facilities by a competitor of The Dow Chemical Company, on the scale of one (1) inch to about one hundred (100) feet would likely cause The Dow Chemical Company to lose substantial business of inestimable amount due to a pricing advantage which would be gained by such a competitor;

THAT possession of aerial photographs of said three (3) production facilities by a competitor of The Dow Chemical Company, on the scale of one (1) inch to fifty (50) feet or less would certainly cause The Dow Chemical Company to lose substantial business of inestimable amount due to a pricing advantage which would be gained by such a competitor and would likely cause such a competitor to avoid incurrence of substantial research and engineering costs in the construction of production facilities of like nature since such photographs could essentially serve as an engineering diagram for construction of a large portion of production facilities of like nature and thereby confer a cost advantage on such a competitor over a party such as The Dow Chemical Company, inestimable in value, which has incurred such research and engineering costs, all to the irreparable harm of The Dow Chemical Company.

Further Affiant says naught.

/s/ ROBERT B. BUMB

[*Jurat Not Printed*]

LEROY L. MASTIC, JR. (DOW)
DEPOSITION EXCERPT 5/9/78

DIST. CT. DKT. 17

* * *

[11] * * * Q. Now, the technology that you've described to us with respect to the configuration of the processing, placement and construction of the heat transfer elements, the location of instrumentation, sir, is this technology particular to Dow or is it common knowledge in the Chlorobenzene industry?

A. The technology and design and construction of this plant is proprietary to Dow. It's unique with us.

Q. Mr. Mastic, are you aware as to whether or not Dow took any security measures during the design and construction of the plant?

A. Yes, we did.

Q. And can you tell me, please, what security measures, if any, Dow undertook during the design of the chlorobenzene plant?

A. Well, the research, design and engineering was all handled by Dow people.

Q. Do I understand by that, sir, that there were no outside contractors called in on the design stages?

A. During the construction phase we had outside contractors at various times in construction.

Q. Let me go on to that. What security measures, if any, did Dow undertake during the construction of the plant as opposed [12] to the design phases?

A. We did several things. There is the normal secrecy agreements with the contractors. In addition, all contractors, except the general mechanical contractor, only worked and was located in his specific area of the plant. The drawings they worked from were construction type drawings, they were not process drawings. In

other words, they did not contain the raw materials being used or the process conditions, temperatures, the pressures. They were primarily just construction drawings.

Q. And what would a construction drawing show to a contractor as opposed to the process drawings?

A. It would show him the elevation, installation of equipment, location of pipelines, foundation details, things that are specifically required for construction.

Q. Would such drawings enable him to duplicate the technology in connection with the plant; in other words, absent the process information?

A. Not directly.

Q. Now, you are if I understand right presently in charge of the overall operation of the chlorobenzene plant and can you gell me what security measures, if any, are currently maintained during the operation of the chlorobenzene plant?

A. Yes. The plant today is located well within the boundary of the Michigan Division. Of course that boundary is fenced and under normal security measures. This plant is not visible from [13] the fence at any point. In addition, this plant is a restricted area. We have signs posted about the perimeter of this plant saying this is a restricted area. Any visitors or anyone coming into this area must report to the office, check in with supervision in the area.

Q. Do you undertake any security measures in the chlorobenzene plant to prevent photography?

A. Yes, there are no cameras allowed. The only photographs of this plant were taken by Dow photographers and they are Dow photographs and used internally for our own purposes.

Q. Do your security measures apply to visitors as well as to Dow?

A. Yes. Visitors must check in at the area and if they are in the plant area they are escorted by members of the plant staff.

* * *

[14] * * * Q. Now, you've indicated the prohibition against cameras in the plant, I believe. What, based on your awareness of the various security measures that were in force during the design, construction of the plant and currently are in force during its operation, what security measures can you provide that would protect the technology from photography from overhead?

A. Well, of course we have our current security measures which I feel are appropriate. To completely protect this plant you'd have to go to some different type of construction. This is an outdoor plant. It was designed that way for a number of reasons. [15] The only way to completely protect this plant from surveillance, say overhead surveillance, would be to put a roof over the plant.

Q. In your opinion, sir, would it be feasible to do that?

A. Not at all.

Q. Could you tell me why not?

A. Well, there would be several reasons. One, the cost. This is a very large plant. The cost of a roof over a structure like this would be enormous and just not practical.

There are other reasons you wouldn't want to do this. There are safety reasons with respect to the safety of the personnel and the equipment. Say for instance you had an inadvertent exposure of raw material. Now, in this plant we use — the basic raw material is chlorine and benzene and if there were say an inadvertent release of these materials for some reason, if this plant were roofed you could have an accumulation or a concentration of the vapors or fumes of these materials presenting

an explosive or hazardous situation to the people and the equipment which would be intolerable. If a plant were roofed you could have this condition so for this reason we have left the plant open.

Q. Mr. Mastic, did you have occasion to view certain overhead photographs of Dow's chlorobenzene plant?

A. Yes.

Q. Do you recall approximately when you had opportunity to look [16] at those pictures?

A. This was several weeks ago.

Q. Now, do you have an opinion as to the benefit to a competitor of Dow's in the chlorobenzene business of access to or possession of such photographs?

A. Yes, I have an opinion.

Q. And would you state that opinion?

A. That opinion, it would be of immeasurable value to one of our competitors.

Q. Based on some of the instances that you have already stated, sir?

A. Yes. As I mentioned before our process is proprietary, it's constructed outdoors. The configuration, the location of the equipment, the process would be of great benefit to competitors. That's one reason.

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H. V. (JACK) WAIT, JR. (DOW)
DEPOSITION EXCERPTS 5/10/78

DIST. CT. DKT. 19

* * *

[11] * * * Q. Let me ask you first, sir, if you are familiar with the security measures that are taken by Dow in the design stages of chloralkali plants?

A. I am.

Q. And can you tell us, please, from your own knowledge what those security measures are?

A. Well, the list is extremely long but some of the more significant measures are that we design a plant using a thing that we [12] call a process flow sheet that's designed in a code that someone not familiar with the code would be unable to interpret what the drawing was telling him.

Q. Who has access to the code breakdown?

A. Only the people with an absolute need to know. Primarily the designers and the people who will later be involved in the plant layout.

Q. How about after design of the construction stages, can you tell us, please, what steps are taken by Dow for security during the construction of a chloralkali plant?

A. Well, primarily any contractors involved have to sign a secrecy agreement and they have to be in good standing, in other words, they have to be a contractor that we have not had some previous problem with. Further than that, the construction site is always fenced, there's always a 24-hour-a-day patrol maintained with the security system and this is to prevent anyone from just perusing the site.

Q. Are cameras allowed on the sites?

A. Absolutely not.

Q. How about after the start-up of the plant, can you tell us what if any security measures are maintained by Dow when the plant is running?

A. All visitors have to sign secrecy agreements. We do not allow cameras into any operating plant. Outsiders are not allowed to interview plant personnel. These would name a few [13] but the list is extremely extensive.

For example, our technical people are required to sign secrecy agreements. Knowledge is disseminated on a need-to-know basis. In other words, we do not make it a point to have each employee completely educated in the whole process. He becomes familiar with those areas that he has a need to know.

Q. Now, are you aware, sir, of any measures that could be taken to prevent aerial photography of the chloralkali plant in Midland?

A. As it stands today I'm not aware.

Q. Can you envisage anything that could be done to prevent aerial photography of the facilities?

A. I suppose it would be possible to build a roof over such a plant.

Q. How large is the plant?

A. It covers 30 acres.

Q. From your standpoint as an engineer would that be a practical alternative?

A. Absolutely not practical.

Q. Have you any idea what the cost would be to roof the chloralkali plant in Midland?

A. It would be extremely difficult to estimate the cost but I would think that you could not do it for less than $15,000,000.

Q. Would there be anything required other than a — other than the [14] erection of a roof over the facilities?

A. Well, the roof alone would introduce a lot of problems. There would be a lot of side effects from such a thing. But the roof alone would probably tend to hide the biggest part of the operation.

Q. To maintain the operation of the chloralkali facility would you have to expend any sums of money for items other than the roof itself?

A. Yes, the maintenance would become far more difficult. For example, today we use giant mobile cranes to move equipment from one place to another during

routine maintenance. These cranes, some of them are as high as 100 or 125 feet. Obviously a roof would not be practical that high so large bridge cranes would have to be installed permanently within the roof which would be extremely expensive. The capacities of some of these things would run into the range of a hundred thousand pounds lift capability so it would be an extremely difficult arrangement.

* * *

[20] * * * Q. From a position off the Dow property here in Midland is the chloralkali facility able to be seen from anyplace in the vicinity?

A. Yes, it is.

Q. Can any information be obtained from someone looking in from the outside?

A. Yes, I'd say it could.

Q. Would any of this information be what you would consider to be of a propretary [*sic*] nature or trade secret nature?

A. Probably not any really significant information but certainly some information.

Q. Is there any further measures taken to prevent people from seeing the chloralkali facility from off the premises?

A. Yes. The plant layout is designed in such a way that the more sensitive areas are not visible.

Q. Specifically what is done to prevent people from seeing?

A. Well, normally we will locate large tanks or other vessels that are nondescript in configuration, we'll locate them between the sensitive area and the public access.

Q. Are there any fences or berms or anything here that would prevent a person from seeing in from the outside?

A. We have a fence line completely around the periphery of the plant and also a berm.

Q. Where is the berm located?

A. It's located inside the fence line.

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LEROY L. MASTIC, JR. (DOW)
DEPOSITION EXCERPT 3/24/81

DIST. CT. DKT. 130

* * *

[51] * * * Q. Do airplanes fly over the chlorobenzene plant with any degree of frequency?

A. I have used commercial flights many times and out of Midland, I am assuming this is the type of thing you are talking about, yes, commercial flights pass over this location.

Q. How about private flights?

A. Oh, I would imagine private planes fly over it.

Q. At the time that you were building or involved in the construction of the chlorobenzene plant, did it enter into your consideration that someone would be able to fly over and photograph matters that you consider to be proprietary technology and that the plant would be vulnerable to this because of a lack of a roof?

A. That type of thing, of course, is possible. Again, the fact that that thing actually — that type of flight actually occurred and those type of photographs were taken I consider that very unusual and rather unique, you don't expect this.

Q. You don't expect photographs of the plant to be taken from the air?

A. Not of the type that are of concern here today.

Q. When you say of the type of concern, what do you have [52] reference to, the circumstances under which it occurred or the level of detail?

A. The fact that it was an unauthorized flight and that circumstance generated some photographs of such detail that I'm very concerned about them.

Q. So it was the fact that the flights were unauthorized — I'm just trying to understand. Is it the fact that the overflight was unauthorized that was the factor that surprised you?

A. Planes can fly over here every day and they do, and if they don't take photographs, I'm not concerned with those flights. What I am concerned about is a flight that comes over here at a low altitude and takes specific photographs such as we are concerned about here today.

Q. But did the possibility ever enter into your considerations and I have reference to an incident similar to the one that is the subject matter of this lawsuit; did that possibility ever enter into your consideration at the time that the chlorobenzene plant was under construction?

A. Matters such as this I think are always under consideration when you are talking about security of your location. And for instance, the way this particular flight occurred, I believe our plant protection people who are skilled in security matters detected the flight. To what concern this type of thing was during our construction, we know [53] when we build an outdoor plant this type of thing can always occur, it's not impossible, but it's quite improbable. This is why we were surprised that it occurred.

Q. You are surprised by the fact that it was unauthorized?

A. Yes.

Q. But you are not surprised by the fact that aerial photographs — that it is possible to take aerial photographs, authorized or unauthorized, of the plant?

A. That's a fact, they can be taken.

Q. And that possibility didn't enter into your consideration in the way you designed the plant?

A. Whenever you construct a plant that's of a nature that it can be photographed, of course you realize this, you know this. But there are usually other overriding reasons that you construct a plant in such a manner as we constructed this one.

Q. Do you take measures to maintain the possible exposure of proprietary technology when you construct the plant in the manner that you did to protect against the possibility of an unauthorized aerial photograph?

A. To a degree.

Q. Okay.

A. I think we do to the degree that it's prudent and reasonable and consistent with good construction practices and construction of safe facilities.

* * *

[88] * * * Q. Do you suggest that prior to that particular incident there was no clear policy concerning photographs taken by Dow employees from other divisions?

A. There has always been a clear policy concerning the photographs, films and tapes and cameras and how they are used. Policy procedures can always be updated and changed.

[89] Q. Do you know how old that policy concerning the use of films and tapes and video tapes and the like is, cameras?

A. It would go back many, many years. It was in force when I came here over 25 years ago.

Q. Are you aware of any other incidents in which there was some deviation from procedures regarding security?

A. Yes, the issue at hand today.

Q. But that, of course, isn't covered by anything that Dow has any control over.

A. It very clearly says that the Major Manager is to approve those kinds of photographs that are taken of his process and technology and approve their release.

Q. So it is your —

A. I feel very strongly about this.

Q. So it is your position that any photographs taken by anyone of the Dow plant has to have your approval?

A. Yes.

Q. I'm sorry. Of the Dow chlorobenzene plant.

A. Absolutely.

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MICHAEL KELYMAN (DOW)
DEPOSITION EXCERPT 3/25/81

DIST. CT. DKT. 131

* * *

[78] * * * Q. Do you know whether your office, your present office, whether the plant security office for the Michigan Division or any other office has ever considered making a recommendation that steps be taken to protect a project of the Dow Chemical Company from loss of trade secrets or proprietary information by means of aerial photography?

MR. GLEESON: Now, just as a query to clarify your question, are you going so far as to say recommendations to institute litigation, is that included in your questioning?

MR. BERRY: Certainly.

MR. GLEESON: Okay.

A. Well, with that the litigation is obviously a measure, and that was instituted.

[79] Q. Any other steps, or excuse me, any other times where that has occurred?

A. Again I'll refer to the practices that we have with reporting of employees and going to the extent of investigating why we had a flyover and even going so far as to inspect the pictures that were taken and replace film for the individuals and so forth, so on.

* * *

[121] * * * Q. Does your staff, and when I refer to your staff, I'm referring to your present staff, and the staff which was [122] under you when you were manager of plant security for the Michigan Division attempt to identify the owner of each aircraft which is considered to be suspicious and flying over the Midland facility?

A. We will if they've been considered suspicious, we will attempt to.

Q. How do you determine the identity of those individuals?

A. We go back through the flight control towers. If there's two or three or four possibilities, you go through the flight control tower and the Barstow Airport to see whether or not they can — they are aware of who that aircraft might belong to and who was flying it. If we are unsuccessful in that particular vein, if we have the numbers we have a certain list of local aircraft that we have we retain numbers on, and then beyond that we will go either to Grand Rapids or to Oklahoma City through the FAA to run down numbers on aircraft. And we have even on one occasion gone to aircraft manufacturers to determine who, in fact, they sold the aircraft to when it's changed hands a couple of times.

It depends on how much interest we've got and what we are trying to find out.

Q. How do you identify the purpose of the aircrafts passing over the Dow facility?

A. About all we can do is try — that's the purpose in trying [123] to run the individual down, to get a statement from him as to why he was doing so forth, so on. And preferably, if you will note in the procedures there we say it's important to make phone calls as rapidly as possible so that if an aircraft does land at one of the local airports that we can get a handle on him very quickly and get somebody over there before they've got a chance to get rid of their passengers or equipment or something like that. We will make every attempt that we can – reasonable attempt to get that kind of information.

Q. And if you are told by the person you contact that they did not photograph the plant, what do you do?

A. If we generally — well, there's a couple of things you can do. Either you take them at face value or you, as you make your inspection, visiting with that particular individual, you would take note of how that plane might be equipped, whether or not you as an individual noticed any particular photographic equipment. You might converse with the pilot who took them up to substantiate that individual's claim as to whether he did or didn't take photographs.

Q. And if there's no special equipment and the pilot tells you no photographs were taken?

A. Probably we'd not pursue it any further than that.

* * *

[181] * * * [A.] . . . If the photographs were available and the negatives were available, he would have taken those and we would have developed them in a Dow laboratory, we would have screened the pictures and we would have reimbursed the individual for the film that we destroyed. That is our policy.

* * *

H. V. (JACK) WAIT, JR. (DOW)
DEPOSITION EXCERPT 4/8/81

DIST. CT. DKT. 152

* * *

[40] * * * [Q.] . . . Can you tell me how long you examined the photographs back in 1978 which were identified to you as the photographs that the EPA had taken?

A. No.

Q. Do you recall whether it was for more than an hour?

A. Yes.

Q. Was it for more than an hour?

A. Yes.

Q. Do you recall how much more than an hour it was?

A. No.

Q. Did you spend the time of your examination attempting to pick out details to which you referred here today concerning the plant layout?

A. Yes.

Q. And do you recall approximately how long it took you to do that?

A. No.

Q. Well, was it more than an hour?

A. I picked out some details instantly.

Q. Was that based upon the fact that you're familiar with the plant?

A. Some of it, yes.

* * *

[43] * * * Q. Let's talk about a person who has experience in a plant similar to the Dow plant which produces similar products, let's say a man of your experience, comparable to yours but doesn't have the precise knowledge of the Dow plant that you have, but has knowledge of a similar plant.

A. I do not believe he could gain useful proprietary information.

Q. From a view from the outside?

A. That's correct.

Q. And when you say useful proprietary information, what do you mean?

A. Information that he would understand what it was when he [44] looked.

Q. And why would he not be able to gain that information?

A. He would not know what he saw.

Q. Would that also be true if he viewed the same piece of equipment or technology from the air?

A. It would not be true in the same sense.

Q. Well, can you give me the distinction or the benefit of the distinction that you're drawing?

A. The view that he would have from the ground outside the fence is the view that we have chosen to show him.

The view from the air is almost equivalent of a process drawing that would show the relationship of other equipment, from which he could decide and figure out what he wished to know.

Q. What if he flew over in an airplane, would he be able to make that same determination?

A. Not the same as from a photograph.

Q. But would he be able to pick up some of the information to which you referred to?

A. Possibly.

Q. Would he be able to increase his knowledge with more flights over the plant?

A. I would say yes.

Q. Do you believe that he could ever come to the point where he could gain as much knowledge of Dow's proprietary [45] technology from repeated flights over

the plant as he would gain from a view of the photographs here?

A. No.

Q. Would he gain information that you would consider to be of substantial benefit to him, nonetheless?

A. How many flights?

Q. Well, why don't we turn that question around and ask you how many flights over the plant do you think it would take for this hypothetical person that we're referring to to gain what you might consider information of substantial benefit to competitors?

MR. GLEESON: If you're allowing yourself to consider other factors and judge the frequency of flights, you should include that in your answer such as to altitude.

A. I guess from my standpoint, I don't exactly understand what he means by how many flights.

Q. (Mr. Allen, continuing): You indicated that you wanted to know how many flights the person would take.

A. That would be my first question.

Q. I'm asking you how many flights do you believe, that is, how many aerial passes in an aircraft of one sort or another would it take for a person, the hypothetical person to which we referred to here today, to gain information concerning the chloralkali facility which [46] you would deem to be of significant benefit?

A. At what altitude?

Q. Well, you can identify that altitude for me as well.

A. At a low level flight some information could be gained on the first flight.

Q. When you say low level, what level are you referring to?

A. 500 to 1000 feet.

Q. 500 to a thousand feet. What about at a level of 5000 feet?

A. With an unaided eye?
Q. With an unaided eye.
A. No useful information.
Q. No useful information.
What about an overall flight at 3000 feet?
A. Unaided eye?
Q. Unaided eye.
A. No useful information.
Q. How about a flight at 2000 feet?
A. Possibly some useful information.
Q. Some useful information?
A. Possibly.

* * *

[50] * * * Q. Can you tell me at what altitude it would take a person with the experience which we have hypothesized today to gain what you would consider significant information of the chloralkali facility with an unaided eye?

A. I think there would be many altitudes that this can be done.

Q. Can you specify those altitudes?

A. The lower, the better.

Q. The lower, the better?

A. The higher, the less information you would gain, but there is no cutoff.

Q. Well, could you give me an indication of the altitude at which the height is sufficient that you would no longer gain significant information?

[51] * * * A. My general opinion is at somewhere around a half a mile altitude I would no longer be concerned with what someone could see with an unaided eye. Less than that, I would become increasingly concerned more than I would become disinterested.

* * *

LETTER DATED 6/21/79
FROM UNION CARBIDE CORPORATION TO EPA,
REGARDING AERIAL SURVEILLANCE PER EPA's SUPPLEMENTAL ANSWERS TO INTERROGATORIES FILED 4/17/81

DIST. CT. DKT. 134

UNION CARBIDE CORPORATION
270 PARK AVENUE NEW YORK, NEW YORK 10017 (212) 551-2491
ROBERT L. DOAN ASSISTANT GENERAL COUNSEL

George A. Shanahan, Esq. June 21, 1979
Attorney, Water Enforcement Branch
Enforcement Division, Region II
United States Environmental Protection Agency
26 Federal Plaza
New York, New York 10007

Re: Proposed EPA Overflights of Erie and Niagara Counties, New York, June 25-29, 1979

Dear Mr. Shanahan:

This is in response to your letter of June 14 to Mrs. Mary G. Manetti of our Law Department, in which you advised us that EPA proposed to conduct photographic flights over Erie and Niagara Counties, New York, during the week of June 25 and asked us to contact you if we had any objection to these overflights. To the extent that you contemplate photographing any Union Carbide Corporation facility, we vigorously protest and object to this aerial intrusion. The statutes that you cite do not contemplate this type of access to our facilities. The overflights, if conducted without a search warrant, will violate the rights of Union Carbide against unlawful search and seizure under the Fourth Amendment to the U.S. Constitution and, with or without a search warrant, may constitute an unlawful taking of Union Carbide proprietary information in violation of the Fifth Amendment to the U.S. Constitution.

Your letter does not indicate what types of surveillance techniques are contemplated, but we do have to assume that the overflights may be using the full range of aerial photography, multi-spectral scanning and laser scanning techniques that have been developed to date by the EPA's Environmental Monitoring & Support Laboratory as well as the other governmental agencies known to be [*pg.* 2] involved in aerial surveillance. Therefore, we must assume that there is substantial risk of loss of proprietary information unless and until we have had an opportunity to review a set of all photographs taken of any Union Carbide facility during next week's overflights and by this letter I request that a full set of prints of all such photographs be mailed to my attention as soon as prints are available, so that we may determine what additional steps must be taken in order to protect our proprietary interests. We also reserve the right to request access to the negatives in order to make our own prints in the event we experience difficulty in enlarging the prints you provide to us.

I am familiar with the April 11, 1979 letter sent to all EPA Regional Administrators by Marvin B. Durning, the Assistant Administrator for Enforcement, establishing new procedural guidelines to be followed by EPA in the light of the Supreme Court's decision in *Marshall* v. *Barlow, Inc.*, 46 LW 4483 (1978). Nowhere is the subject of overflights discussed. We seriously question whether the EPA is desirous of setting forth all the detail of the surveillance techniques now being used by EPA in any warrant application to the extent contemplated by Mr. Durning's letter or whether, once such details are set forth, any Federal Judge or Magistrate would sign any warrant authorizing the utilization of those techniques.

We are aware that the EPA has previously made aerial photographs of Union Carbide facilities as part of a

broad surveillance of the Kanawha Valley, West Virginia. On March 5, R. L. Foster of our South Charleston, West Virginia office, requested a set of those photographs under the Freedom of Information Act. We have been advised that the photographs were finally mailed on June 20 by the EPA's National Enforcement Investigations Center in Denver. When we have had an opportunity to analyze these photographs, we contemplate requesting under FOIA a full and complete list of all Union Carbide facilities which have been subjected to aerial surveillance by (or at the direction of) EPA, seeking access to those photographs and demanding the return of all photographs (negatives as well as prints) that contained proprietary Union Carbide information and for the retention of which EPA could not establish any continuing need based on ongoing investigations. Those photographs (if any) that fell into the latter category, we would seek to subject to appropriate protective orders.

[*pg. 3*] It is disturbing to find that the EPA's file of proprietary information taken from Union Carbide without our consent is continuing to grow even as we try to get a fix on its present contents and the extent of our loss to date. I strongly urge that EPA call an immediate halt to all overflights of commercial facilities throughout the United States (and not just the overflights contemplated for next week in Erie and Niagara Counties) until reasonable ground rules can be developed for limiting the amount of proprietary information collected by EPA to the absolute minimum and providing adequate protection for that irreducible minimum. I believe that this is a matter in which EPA's General Counsel needs to be involved and would appreciate your bringing this letter to her attention through your Region Office as promptly as possible.

Very truly yours,

RLD:jw /s/ Robert L. Doan

LETTER DATED 6/22/79 FROM FMC CORPORATION TO EPA, REGARDING AERIAL SURVEILLANCE PER EPA'S SUPPLEMENTAL ANSWERS TO INTERROGATORIES FILED 4/17/81

DIST. CT. DKT. 134

FMC CORPORATION
2000 MARKET STREET PHILADELPHIA, PENNSYLVANIA 19103 (215) 299-6000

CERTIFIED MAIL *RETURN RECEIPT REQUESTED*

George A. Shanahan, Esq. June 22, 1979
Attorney, Water Enforcement Branch, Enforcement Division
United States Environmental Protection Agency, Region II
26 Federal Plaza
New York, New York 10007

Re: Proposed Aerial Surveillance and Photographing by EPA Region II along the Niagara River — Week of June 25-29, 1979

Dear Mr. Shanahan:

Your letter dated June 14, 1979, advising me of the above-referenced surveillance and photographing, was received by me on June 18, 1979. To the extent that such surveillance and photographing involves FMC facilities and sites, we do object and expressly do *not* waive any rights in this regard.

In my opinion, the standard inspection/right of entry provisions from the various water, air, hazardous waste, and toxic substances statutes cited in your letter do not authorize the proposed surveillance and photographing. As you are aware, the United States Supreme Court recently addressed a similar issue in *Marshall* v. *Barlow's Inc.*, 436 U.S. 307 (1978), and determined that the inspection provision (similar to those in the water, air, hazardous waste, and toxic substances statutes) in the Occupational Safety and Health Act does not override constitutional requirements and is unconstitutional to the extent it is construed to authorize a warrantless search or inspection. Also, as you

may be aware, in a situation even more proximate to that which EPA Region II proposes, in that it also involved aerial surveillance and photographing, the Dow Chemical [*pg.* 2] Company has brought suit (*Dow Chemical Co.* v. *Costle*, Civil Action No. 78-10044, U.S. D.Ct., E.D. Mich.) against EPA over such aerial surveillance and photographing, alleging *inter alia* violation of constitutional rights guaranteed by the Fourth and Fifth Amendments. Dow has obtained a temporary restraining order and preliminary injunction in this proceeding.

In any event, assuming the aerial surveillance and photographing occur, as stated in your June 14, 1979 letter, in possible contravention of FMC's constitutional and other rights, the photographs taken as a result may well contain business confidential information which, if published, or released to a competitor, could be detrimental to FMC's interest and position in the market. If such photographs are taken, we request that to the extent that they pertain to FMC facilities and sites they be maintained as business confidential information under the provisions of 40 C.F.R. Part 2, and that FMC be immediately furnished with copies of such photographs. We further request that any report or other document which includes such photographs or otherwise records the results of or observations made during the proposed aerial surveillance relative to FMC facilities and sites be maintained as business confidential information, and that copies of such reports or other documents be immediately furnished to FMC.

Yours very truly,

/s/ David C. Landgraf, Counsel

cc: Eckhardt C. Beck, Regional Administrator, EPA Region II; Director of Enforcement, EPA Region II; Peter Devine, Esquire, Regional Counsel, EPA Region II; Joan Bernstein, Esquire, General Counsel, EPA Washington; Marvin Durning, Esquire, Assistant Administrator for Enforcement, EPA Washington.

WIRE DATED 1/11/80 FROM EPA TO MONSANTO, REGARDING AERIAL PHOTOGRAPHY ATTACHED TO DOW's MOTION TO COMPEL DISCOVERY FILED 3/26/81

DIST. CT. DKT. 117

— *WESTERN UNION MAILGRAM* —

US ENVIRONMENTAL PROTECTION AGENCY
324 EAST 11 ST
KANSAS CITY, MO 64106

4-061476S011003 01/11/80 ICS IPMBNGZ CSP STLB
2 8163746534 MGM TDBN KANSAS CITY MO 01-11 0510P EST

▶ MONSANTO QUEENY WORKS
ATTN PLANT MANAGER OR RESPONSIBLE PARTY
1700 SOUTH SECOND ST
ST LOUIS MO 63177

THIS IS A CONFIRMATION COPY OF A PREVIOUSLY PHONE-DELIVERED TELEGRAM

EPA REGION 7 WILL BE CONDUCTING AN AERIAL SURVEY OF THE METROPOLITAN ST LOUIS AREA THE WEEK OF JANUARY 14. AERIAL PHOTOS OF YOUR FACILITY WILL BE TAKEN AS PART OF THIS SURVEY. PLEASE DIRECT QUESTIONS TO KENNETH SCOTT RITCHEY AT 816-374-6534.
ROBERT MORBY 324 EAST 11 ST KANSAS CITY MO 64106

17:11 EST

MGMCOMP MGM

WIRE DATED 1/14/80 FROM MONSANTO TO EPA, REGARDING AERIAL PHOTOGRAPHY ATTACHED TO DOW's MOTION TO COMPEL DISCOVERY FILED 3/26/81

DIST. CT. DKT. 117

— *MONSANTO OUTGOING MESSAGE* —
Tele-Communications System

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TWX/TELEX NO.: 816-374-2605

MR. ROBERT MORLEY
ENVIRONMENTAL PROTECTION AGENCY *R-U-S-H*
REGION VII
324 E. 11th STREET *BOOK MESSAGE*
KANSAS CITY, MISSOURI 64106

WE HAVE BEEN INFORMED THAT THE EPA IS TENTATIVELY PLANNING TO TAKE AERIAL PHOTOGRAPHS OF THE METROPOLITAN ST. LOUIS AREA DURING THE LATTER PART OF THE WEEK OF JANUARY 14, 1980. MONSANTO HEREBY OBJECTS TO SUCH AERIAL PHOTOGRAPH OF MONSANTO FACILITIES. PRIMARY REASON FOR OBJECTION IS TO PROTECT VALUABLE PROPRIETARY INFORMATION, WHICH WOULD BE DISCLOSED BY SUCH AERIAL PHOTOGRAPHY. IN ADDITION, SUCH AERIAL PHOTOGRAPHY WOULD VIOLATE THE PROHIBITION AGAINST UNREASONABLE SEARCHES AND SEIZURES IN THE FOURTH AMENDMENT TO THE U.S. CONSTITUTION.

PHOCION S. PARK
ENVIRONMENTAL COUNSEL
MONSANTO COMPANY

CC: KENNETH SCOTT RITCHEY, EPA, REGION VII,
324 E. 11th Street, KANSAS CITY, MISSOURI 64106

for BETTER *service* – Forward to transmitting operator IMMEDIATELY after preparation.

IN-IR Rev. 1/74

WIRE DATED 1/17/80 FROM EPA TO MONSANTO, REGARDING AERIAL PHOTOGRAPHY ATTACHED TO DOW's MOTION TO COMPEL DISCOVERY FILED 3/26/81

DIST. CT. DKT. 117

— *WESTERN UNION MAILGRAM* —

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324 EAST 11
KANSAS CITY, MO 64106

4-043194S017 01/17/80 ICS IPMBNGZ CSP STLB
8163746534 MGM TDBN KANSAS CITY MO 63 01-17 0333P EST

JAN 18 1980

▶ PHOEION [sic] S. PARK, ENVIRONMENTAL COUNCIL, [sic]
MONSANTO CO
800 NORTH LINDBERG BLVD
ST LOUIS MO 63166

THE US EPA REGION 7 HAS RECEIVED YOUR PHONE MESSAGE OF 1-15-80 AND WILL NOT OVERFLY YOUR FACILITIES THE WEEK OF JANUARY 14, 1980. YOU WILL BE NOTIFIED OF ANY DEVIATION FROM THIS DECISION. PLEASE DIRECT QUESTIONS TO MYSELF AT 8163746534.

ROBERT MORLEY
324 EAST 11
KANSAS CITY MO 64106

15:34 EST

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TRANSCRIPT EXCERPT OF 11/12/80 ORAL ARGUMENT ON CROSS MOTIONS FOR SUMMARY JUDGMENT (P. 44)

DIST. CT. DKT. 232

* * *

[Tr. 44] * * * All the Fourth Amendment cases involve a search for evidence. Of course, that's what the government was doing, we don't deny that. * * *

* * *

• • •

ORDER ALLOWING CERTIORARI

Supreme Court of the United States

(Filed June 10, 1985)

Dow Chemical Company, Petitioner, v. United States, etc.
No. 84-1259

The petition herein for a writ of certiorari to the *United States Court of Appeals for the Sixth Circuit* is granted.

The case is set for oral argument in tandem with No. 84-1513, *California* v. *Ciraolo*.

NON-FULLY OWNED SUBSIDIARIES AND AFFILIATES OF THE DOW CHEMICAL COMPANY AS OF JUNE 30, 1985

Subsidiaries and affiliates owned both directly and indirectly have been included. The company italicized is the direct owner of the companies listed below it. "Dow's" percent ownership is indicated by each company.

SUBSIDIARIES

The Dow Chemical Company

Alamo Land Company Inc. (56%)
Gruppo Lepetit S.p.A. (99%)
L.I.F.E. (Laboratorios Industriales Farmaceuticos Ecuatorianos) (59%)
Laboratorios L.I.F.E. del Salvador S.A. (59%)
Negocios e Industrias S.A. "Neisa" (59%)
Pacific Chemical Berhad (51%)
Pacific Cable Products Sendirian Berhad (51%)
Ivon Watkins-Dow Ltd (51%)
Société Industrielle de Plastic et de L'acier SA (99%)
The Cynara Company (90%)

Dow Chemical A.G.
(A.G. owned 100% by The Dow Chemical Company)

Petroquimica-Dow S.A. (70%)

AFFILIATES

The Dow Chemical Company

Dow Corning Corporation (50%)
Dowell Schlumberger Corporation (50%)
Dowell Schlumberger Incorporated (50%)

Compagnie des Services Dowell Schlumberger (50%)
El Dorado Terminals Company (50%)
Agro-Quimica Maringa (20%)
Bank Mendes Gans (29%)
Chemi-Trol Chemical Company (23%)
DOKI (49%)
Estireno Del Zulia C.A. (25%)
Ibachem Ltd (40%)
Oasis Pipeline Company (30%)
Package Machinery Company (29%)
Piramides Brazil (30%)
Total Raffinaderij Nederland N.V. (20%)
Zoo Agro de Venezuela C.A. (49%)
Al Miyah Chemicals (Ltd.) (49%)
Baratek (80%)
Boersele Hydrocracker B.V. (45%)
Insul/Crete Company, Inc. (50%)
Joliet Marine Terminal (50%)
Long Beach Marine Terminal (50%)
Metal Mark Inc. (50%)
Oronzio De Nora Impianti Elettrochimici SA (50%)
Sinor Corradini Navarra S.A. (90%)
Technovest Corp. (20%)

Dow Chemical A.G. (A.G. is
owned 100% by The Dow Chemical Company)

Polychem Ltd (25%)

Coral Navigation (Coral is
owned 100% by The Dow Chemical Company)

Chief Shipping Company (50%)

Dow Chemical Company Ltd
(Ltd is 100% owned by Dow Chemical A.G.)

Cromarty Petroleum Company Ltd (50%)

Dow Chemical of Canada Ltd (Canada Ltd is
100% owned by The Dow Chemical Company)

Schlumberger Canada Inc. (50%)
Fort Saskatchewan Ethylene Storage Limited (50%)
Lawrason's Chemical, Ltd (20%)
Wabiskaw Explorations Limited (50%)

Maligne Resources Limited (Maligne is
100% owned by Dow Chemical of Canada Ltd)

MT Partnership (50%)

Dow Chemical Africa (Pty) Limited (Africa is
100% owned by Dow Chemical A.G.)

J.V. Chemicals (50%)

Dow Chemical International Energy Company (Energy is
100% owned by The Dow Chemical Company)

Scotdril Offshore Co. (50%)

Dow Chemical S.p.A. (S.p.A. is
100% owned by Dow Chemical A.G.)

Corradini Poliuretani S.p.A. (50%)

Dow Chemical Iberica S.A. (Iberica is
100% owned by Dow Chemical A.G.)

Transformadora De Etileno (50%)

Dow Quimica S.A. (Quimica is
100% owned by The Dow Chemical Company)

Estireno del Zulia C.A. (25%)
Expansao Correctora De Seguros Ltda (33%)

Dofinco, Inc. (Dofinco is
100% owned by The Dow Chemical Company)

DCS Capital Partnership (50%)
DCS Capital Corporation (100%)

Dow Financial Services Corporation (Financial Services is
owned 100% by The Dow Chemical Company)

Dow Banking Corporation (78%)
Dow Scandia Holdings Limited (52%)
Dow MBF Limited (54%)
MBF Factors SDN. BHD. (26%)
MBF Leasing BHD. SDN. (29%)
MBF Leasing (S) Pte. Ltd. (49%)

Office-Supreme Court, U.S.
FILED
JUL 25 1985
ALEXANDER L. STEVAS,
CLERK

No. 84-1259

IN THE

Supreme Court of the United States

October Term, 1984

THE DOW CHEMICAL COMPANY,
Petitioner,

versus

UNITED STATES OF AMERICA,
BY AND THROUGH ADMINISTRATOR,
ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE SIXTH CIRCUIT

PETITIONER'S BRIEF ON THE MERITS

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QUESTIONS PRESENTED FOR REVIEW

I.

IS A HIGHLY SECURED YET OPEN-AIR MANUFACTURING FACILITY AN "OPEN FIELD" WITH NO FOURTH AMENDMENT PROTECTION IN THE MINUTE DETAILS OF ITS COMPLEX PLANT FROM THE GOVERNMENT'S INTRUSIVE, VISUALLY AIDED AERIAL SURVEILLANCE?

II.

DOES SUBSECTION 114(a) OF THE CLEAN AIR ACT AUTHORIZE THE ENVIRONMENTAL PROTECTION AGENCY TO UTILIZE AERIAL PHOTOGRAPHY AS A SITE INSPECTION TECHNIQUE?

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No. 84-1259

IN THE

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THE DOW CHEMICAL COMPANY,
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versus

UNITED STATES OF AMERICA,
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ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

PETITIONER'S BRIEF ON THE MERITS

OPINIONS BELOW

The opinion of the Court of Appeals decided and filed on November 9, 1984 (Petition Appendix A), is reported at 749 F.2d 307. The opinion of the District Court for the Eastern District of Michigan decided and filed April 19, 1982 (Petition Appendix B), is reported at 536 F.Supp. 1355.

JURISDICTION

Jurisdiction of this Court to review the decision of the United States Court of Appeals for the Sixth Circuit is founded upon 28 U.S.C. § 1254(1).

The opinion of the Court of Appeals (Pet. App. A), was decided and filed on November 9, 1984. A Petition for Rehearing was not filed. The Petition for Writ of Certiorari was filed February 7, 1985, and was granted June 10, 1985.

CONSTITUTIONAL AND STATUTORY PROVISIONS

U.S. Const. amend. IV provides:

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

Subsection 114(a) of the Clean Air Act, 42 U.S.C. § 7414(a), provides:

> **Authority of Administrator or authorized representative**
>
> For the purpose (i) of developing or assisting in the development of any implementation plan under section 7410 or section 7411(d) of this title, any standard of performance under section 7411 of this title, or any emission standard under section 7412 of this title, (ii) of determining whether any person is in violation of any such standard or any requirement of such a plan, or (iii) carrying out any provision of this chapter (except a provision of subchapter II of this chapter with respect to a manufacturer of new motor vehicles or new motor vehicle engines) —

(1) The Administrator may require any person who owns or operates any emission source or who is subject to any requirement of this chapter (other than a manufacturer subject to the provisions of section 7525(c) or 7542 of this title) with respect to a provision of subchapter II of this chapter to (A) establish and maintain such records, (B) make such reports, (C) install, use, and maintain such monitoring equipment or methods, (D) sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (E) provide such other information as he may reasonably require; and

(2) the Administrator or his authorized representative, upon presentation of his credentials —

(A) shall have a right of entry to, upon, or through any premises of such person or in which any records required to be maintained under paragraph (1) of this section are located, and

(B) may at reasonable times have access to and copy any records, inspect any monitoring equipment or method required under paragraph (1), and sample any emissions which such person is required to sample under paragraph (1).

Subsection 114(c) of the Clean Air Act, 42 U.S.C. § 7414(c), provides:

Availability of records, reports, and information to public; disclosure of trade secrets

Any records, reports or information obtained under subsection (a) of this section shall be available to the public, except that upon a showing satisfactory to the Administrator by that person that records, reports, or information, or particular part thereof, (other than emission data) to which the Administrator has access under this section if made public, would divulge methods or processes entitled to protection as trade secrets of such person, the Administrator shall consider such record, report, or information or particular portion thereof confidential in accordance with the purposes of section 1905 of Title 18, except that such record, report, or information may be disclosed to other officers, employees, or authorized representatives of the United States concerned with carrying out this chapter or when relevant in any proceeding under this chapter.

STATEMENT OF THE CASE

The genesis of this case was EPA's purposeful surreptitious acquisition of aerial reconnaissance photographs of Dow's entire 2,000 acre fenced and secured Midland, Michigan, manufacturing facility for use as evidence in a Clean Air Act enforcement action concerning emissions from Dow's two powerhouses. After learning of the flyover from the EPA contractor, Dow brought this action under 28 U.S.C. § 1331* to preserve its privacy interests and to protect the details, confidential business

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* Jurisdiction was also based on 28 U.S.C. §§ 1337, 1361, 2201, 2202 and 5 U.S.C. § 701.

information and trade secrets of its open-air operations from public disclosure through the Freedom of Information Act (5 U.S.C. § 552) or any other mechanism.

The District Court placed the aerial photographs under seal (Dist. Ct. Dkt. 15), and later held that EPA's actions constituted an unreasonable search in violation of the Fourth Amendment and exceeded its statutory inspection authority under the Clean Air Act (Pet. App. B-45). The Court of Appeals reversed on both issues, holding that the secured, developed Dow facility was an open field so no search occurred, and that aerial photography is not foreclosed as a site inspection technique under the Act (Pet. App. A-9, 14).

I.

THE DOW MIDLAND, MICHIGAN PLANT

Dow has been manufacturing chemicals at its Midland facility since the 1890's. For reasons of worker safety, economics, maintenance and industry custom, many of the chemical process plants within the Dow Midland facility are open-air plants (A. 59-60, 64-65, 71-72) Research, competition, and protection of its intellectual property such as patents, trade secrets and confidential business information, have always been an integral part of Dow's everyday existence (A. 15, 16, 62, 68).

Dow has thirty-seven (37) secured manufacturing locations in nineteen (19) states. Those locations encompass about two hundred and ten (210) separate manufacturing units, most of which are open-air plants. Dow has not installed "dummy" tanks, pipes, procees equipment, buildings, utility lines or roofs to confuse a photointerpreter (Kelyman Depo. pp. 55-62, 126-130, Dist. Ct. Dkt. 131). The costs would be prohibitive (Kelyman Depo. p. 56, Dist. Ct. Dkt. 56), and such a requirement

would be unreasonable and devoid of either common sense or common practice.

Even the government recognizes that ". . . for economic and engineering reasons it [Dow] has not taken any measures to prevent the aerial viewing and possible photographing of the plant" (Government Memorandum, p. 3, Dist. Ct. Dkt. 124).

To aid in the efficient trial preparation of this case, Dow requested and received approval to designate a representative plant, a brine chemicals plant, within its Midland facility so that discovery and proofs could be more manageable (Dist. Ct. Dkt. 79, 96 and 99). One reason that particular plant was designated is that it also appears on the enlargements made by EPA (A. 34, 37, 41-42; *see* Enlargements 2A-2F, 5A-5F and 10A-10F under seal per Dist. Ct. Dkt. 15).

The one representative plant discussed in this case covers thirty (30) acres* and although not deemed practical by the plant manager/engineer, would have cost at least $15,000,000 to roof in 1978. The practical problems of installing large bridge cranes with sufficient lift capability in the roof structure, or building the roof high enough to move a 100-125 foot high mobile crane underneath are overwhelming (A. 74-75).

Extensive security steps are taken to protect the Dow technology at the Midland facility. At the time of the EPA overflight Dow had a security contingent of approximately one hundred (100) people whose specific function and responsibility was site security. The 3.25 million dollars (1977 dollars) spent per year on the security for the 2,000 acre manufacturing facility to guard against

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* *See* Photographs 1 and 2, Sealed Joint Appendix [The white ground cover is snow].

unauthorized entry or loss of any proprietary process technology includes:

- A chain-link fence at least 8 feet high installed completely around the production facility;
- gates for ingress and egress at various intervals in the fence have an attendant (guard) on duty when any given gate is in operation to admit or allow people to leave the facility;
- closed-circuit television surveillance for continuous monitoring of the various gates and the area along the fence surrounding the facility;
- alarm systems which will indicate unauthorized entry at various locations;
- motion detectors at strategic locations in the facility to indicate movement of personnel in certain restricted areas;
- roving patrols which travel throughout the facility and around the perimeter to augment the other security systems;
- liaison with local public law enforcement officials including radio communication to assist in the apprehension of persons engaged in unlawful activities relating to the production facility;
- a requirement that employees entering the facility must exhibit an identification badge in every instance of entry;
- a requirement that non-employees who wish to visit the facility must be approved and must obtain a visitors pass including a badge which must be exhibited at all times while in the facility;
- a requirement that non-employees who have been approved to visit be greatly restricted in their move-

ments and that some areas of the facility remain off-limits to all non-employees;

- a requirement that cameras by anyone other than an authorized representative of Dow are prohibited at all times and in all places in the facility;
- a requirement that persons visiting for technical reasons must obtain a technical pass which provides among other things that the visitor will not disclose any technical information learned as an incident to the visit;
- a staffing program such that security personnel are on duty twenty-four hours a day and seven days a week with at least twenty-five such people on duty at all times and with about fifty people on duty during normal work hours; and
- a policy that, in the event the engineering drawings and/or blueprints of a specific production plant are to be disposed of at the conclusion of construction, the drawings and/or blueprints would be packaged and incinerated under the direction of security personnel who would also witness the incineration (A. 55-57, 60, 65).

In addition to the above on-going security measures, during the creation of plants involving proprietary technology or design, Dow people handle all the research, design and engineering (A. 69). Such plants are designed by "absolute need to know" Dow employees using a process flow sheet written in code (A. 60-61, 73). The actual construction is done by contractors from piece-meal construction-type plans that do not disclose the overall process. The construction site is always fenced; there is always a 24-hour-a-day patrol and non-Dow cameras are never allowed (A. 16-20, 69-70, 72-74). In addition, all technical people, both Dow employees and contractors, sign secrecy agreements and are usually not completely

educated in an entire process (A. 17, 60-61, 74). The plant layout is designed in such a way that the more sensitive, proprietary technology areas are not visible from the public rights-of-way outside the fence (A. 60, 65, 70, 75). The general public's view of the facility from the ground outside the fence is the view that Dow chooses to show (A. 83).

Dow has a long-standing security procedure that prohibits the taking or releasing (outside of Dow) of photographs of the plant without specific Division Management review and approval (A. 13, 18, 20, 56, 66, 70). Absolutely no non-Dow cameras are allowed on plant property (A. 19-20, 73). The only photographs taken on-site are those taken by a Dow photographer after Major Manager authorization (A. 56, 61, 70).

As part of its overall security program, Dow has specifically instructed its security people to watch for and attempt to identify suspicious aircraft (multiple passes over the plant). Dow's concern about aerial photographs of its open-air facilities dates back to World War II (A. 13, 78; Kelyman Depo. pp. 26-27, Dist. Ct. Dkt. 131).

The written procedure for Reporting Planes Over The Plant, which was in effect at the time of the EPA overflight, included obtaining a description of any unidentified plane over the plant and then working with the Michigan State Police for follow-up* (A. 13-14, 79-81). That aerial security procedure was known to the people in the clockrooms and at the gates and to all Dow Security personnel, including captains, dispatchers, scouts, inspectors, and patrolmen (A. 13, 15). Additional information on the overflights of concern and Dow's liaison with the local

---

* Between February of 1973 and April of 1978, Dow's contact for information on plane registrations changed from the Michigan State Police to the Federal Aviation Administration and the local airports (Kelyman Depo. p. 98, Dist. Ct. Dkt. 131).

Federal Aviation Administration office and the local airports was distributed to Dow Security personnel shortly after the EPA overflight (A. 21-22).

If Dow discovers aerial photographs have been taken, Dow either develops and/or replaces the film, or reviews the photographs, or institutes litigation to protect its privacy and proprietary technology (A. 79-81).

II.

EPA's SEPTEMBER 1977 ON-SITE INSPECTION, REPETITIVE INSPECTION REQUEST, AND DETAILED AERIAL PHOTOGRAPHY

Prior to September 1977, EPA was conducting an investigation of Dow's two powerhouses (EPA Answer, ¶ 22, Dist. Ct. Dkt. 76). EPA stated that the September 9, 9, 1977, inspection was motivated by an impending enforcement action against Dow (A. 26). However, before making the September on-site inspection EPA felt it had enough information to proceed with its enforcement action without additional information from or about Dow (A. 27-28).

On September 9, 1977, with Dow's consent, EPA made a three-hour inspection of the Dow power plants (A. 23-26). EPA received the full cooperation of Dow, complete tours through both powerhouses, and all the information it requested to see or gather (A. 23, 26-27). Dow withheld nothing from EPA that EPA asked to inspect or see (A. 27).

After the inspection an EPA contractor, who was present at the inspection, requested additional documentation on the physical layout around each of the powerhouses and on the boilers and turbines within the powerhouses (A. 23-24). On September 21, 1977, Dow voluntarily provided the schematic drawings as requested

(A. 25; EPA Answer, ¶ 25, Dist. Ct. Dkt. 76). EPA received the schematics of the Dow powerhouses before the EPA aerial photography of the Dow Midland facility on February 7, 1978 (Beyer Depo. p. 31, Dist. Ct. Dkt. 30).

On December 1, 1977, EPA requested entry to Dow's Midland facility on December 5th to inspect and photograph the powerhouses and incinerator (A. 28-29). On December 2, 1977, Dow notified EPA that the proposed December 5th repetitive inspection was refused (A. 29), and discussed the possibility that EPA would seek a search warrant to gain entrance to Dow's facility (Pribila Affidavit, Exh. A to Dow's Motion For Partial Summary Judgment, Dist. Ct. Dkt. 120). EPA did not seek a search warrant (EPA Answers to Interrogatories No. 38, Dist. Ct. Dkt. 22).

After being refused admission for a repetitive inspection and the taking of ground photographs, EPA Region V requested aerial photographs of the Dow facility from the EPA's Environmental Monitoring And Support Laboratory (EMSL) in Las Vegas by letter dated February 3, 1978 (A. 32). EPA's request states that the photographs would be used as direct evidence in the impending enforcement action relating to the powerhouse emissions (A. 32).

On February 6, 1978, Abrams Aerial Survey of Lansing, Michigan, received an order for services from EMSL. Abrams was to take aerial photographs of the Dow Midland facility from various altitudes and perspectives as soon as business schedules and weather conditions would permit (A. 36, 39-41, 45-47).

Between 2 and 3 p.m. on February 7, 1978, Abrams Aerial Survey flew over (6 passes) and photographed the Dow Midland facility with a precision, floor-mounted certified aerial mapping camera in accordance with the instructions given by EPA (A. 39-46).

Abrams sent the undeveloped film to EMSL via commercial air baggage (A. 41, 46). Personnel at EPA's EMSL facility printed various sets of color contact prints and fifty color enlargements (A. 34, 37, 41-42; *see also* photographs under seal per Dist. Ct. Dkt. 15). EPA personnel with experience in photographic analysis, photographic enhancement, or photographic reconnaissance examined the photographs (A. 36, 44). Most of the prints were sent by commercial air freight from EMSL in Las Vegas to EPA Region V in Chicago, where enlargements were hung on an office wall and the remaining enlargements and prints were kept on a desk or table in one office, and the floor or heating duct of another office for a month (A. 37, 52, 53).

The scale of the aerial negatives taken by EPA from 1200 feet is 1:2400 (1 in. = 200 ft). Aerial negatives taken from a vertical perspective at approximately 1200 feet with the equipment and film utilized in this case can be enlarged to a scale of approximately 1 inch equals 20 feet or greater without significant loss of resolution (A. 46). Examination of the original aerial contact prints (unenlarged) under magnification reveals items as small as ½ inch in diameter (A. 53-54)*. Examination of the photographs enlarged to a scale of 1 inch equals 10 feet (Dist. Ct. Dkt. 171, Exhibits 4A-D and 5A-B – under seal; *see also* Photograph #5 in Sealed Joint Appendix) shows no significant loss of resolution.

EPA did not notify or in any other way involve the state or other federal agency in the photographing of Dow's plant (A. 35). Dow was not advised by EPA about

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* The District Court (Pet. App. B-3) and the Court of Appeals (Pet. App. A-3) both note that items as small as ½ inch in diameter are discernible when the enlargements are viewed under magnification. That detail is also visible when the unenlarged, *original* contact prints are viewed under magnification.

the photographic mission either before or subsequent to its occurrence (Kee Depo. p. 51, Dist. Ct. Dkt. 28). The aerial photographs taken of the Dow Midland facility on February 7, 1978, by Abrams Aerial Survey are the only photographs taken, or procured, of the Dow facility by EPA (A. 33).

In the aerial photographs EPA captured not only Dow's 2,000 acre fenced manufacturing area, but also Dow's research and corporate office areas, other corporations' open-air structures and activities, and most of the city of Midland (*see* photographs under seal per Dist. Ct. Dkt. 15). The photographs depict minute items which are located in interior, non-public, regions of the open-air brine chemicals plant and which are surrounded by structures and equipment which make observation from anywhere but directly next to or directly above, a near physical impossibility (Wait Depo. (Sealed), Vol. III p. 97, Dist. Ct. Dkt. 152). The camera saw a great deal more than the human eye could ever see (Pet. App. B-27).

III.

LOWER COURTS' OPINIONS

Upon learning of the overflight and the taking of aerial photographs, Dow filed suit on March 15, 1978, alleging EPA's actions were unconstitutional and beyond its statutory authority (A. 1). Dow sought and received a temporary restraining order and a preliminary injunction which prohibited EPA from disseminating, releasing, copying or duplicating the photographs (or derivative information), taken of Dow's facility in Midland, Michigan (A. 2-4). Dow objects to the government's taking of any detailed, intrusive photographs of its facility from any perspective – aerial or otherwise. The fact that the photo-

graphs were exculpatory in that no powerhouse emissions were depicted (A. 31), does not alter Dow's objection.

The District Court granted Dow's Motion for Partial Summary Judgment on April 19, 1982, and found that EPA's actions of capturing the entire facility in vivid detail (to the point of discerning items ½ inch in size) after consent for an inspection had been refused and without judicial authorization was a violation of Dow's reasonable expectation of privacy and an unreasonable search in violation of the Fourth Amendment (Pet. App. B-32). The District Court also found that aerial photography is outside of EPA's inspection authority since the practice of aerial photography cannot comply with the plain language of Section 114(a)(2) of the Clean Air Act, which requires EPA to present credentials before entering to, upon or through a site to inspect records, check monitoring equipment, or take samples (Pet. App. B-44).

After the District Court's ruling on the cross-motions for partial summary judgment, Dow dismissed without prejudice its Fifth Amendment claim of taking of property without due process (Dist. Ct. Dkt. 219), and final judgment was entered. The government appealed.

On November 9, 1984, the Court of Appeals reversed the District Court's opinion. The Court of Appeals found that Dow's 2,000 acre secured commercial development was an open field from the air and hence there was no search (Pet. App. A-9). The Court also held that "[a]lthough the [Clean Air Act] does not expressly authorize enhanced aerial observation, the language of Section 114 clearly does not foreclose this technique" (Pet. App. A-14).

No petition for rehearing was filed. The Petition For Writ of Certiorari was filed February 7, 1985, and was granted June 10, 1985 (A. 94).

SUMMARY OF THE ARGUMENTS

I. and II.

EPA's intrusive aerial photographs infringe upon the personal and societal values protected by the Fourth Amendment. The Court of Appeals held that if EPA's action constituted a search, then *Marshall* v. *Barlow's Inc.*, 436 U.S. 307 (1978), controls, and EPA's warrantless search violated Dow's Fourth Amendment rights (Pet. App. A-5). However, the Court of Appeals, relying on *Oliver* v. *United States*, 80 L.Ed.2d 214 (1984), found that Dow's secured facility was "like an open field" (Pet. App. A-9). Once Dow's developed and secured commercial structure was held to be an "open field," by definition no search occurred. *Hester* v. *United States*, 265 U.S. 57 (1924).

The Court of Appeals decision that Dow's secured, multi-million dollar industrial complex is an open field is novel, startling and absolutely unsupported in either fact or law. A secured, developed industrial facility is *not*, and has *never* been held to be, an "open field."

The decision misapplies the open fields doctrine as reaffirmed in *Oliver*. In doing so, the decision is clearly inconsistent with a long line of prior holdings of this Court that a commercial establishment is entitled to Fourth Amendment protection. *Silverthorne Lumber Co.* v. *United States*, 251 U.S. 385, 392 (1920); *See* v. *City of Seattle*, 387 U.S. 541 (1967); *Marshall* v. *Barlow's Inc.*, *supra*; *Air Pollution Variance Board* v. *Western Alfalfa Corporation*, 416 U.S. 861 (1974); and *Oliver* v. *United States*, *supra*.

Dow's reasonable expectation of privacy is its expectation that the minute details of its outdoor manufacturing plants, detail which is *not* visible to the airborne eye and which Dow seeks to protect, will remain private. That expectation is legitimate and reasonable.

It is well established that intrusive government surveillance into a protected area or activity — such as a home or apartment, or a commercial structure, or a private conversation in a phone booth, is an unreasonable search. *Katz* v. *United States*, 389 U.S. 347 (1967); *United States* v. *Lace*, 669 F.2d 46 (2nd Cir. 1982), *cert. denied*, 459 U.S. 854; *United States* v. *Taborda*, 635 F.2d 131 (2nd Cir. 1980); *United States* v. *Kim*, 415 F.Supp. 1252 (D.Ha. 1976). In this case EPA used sophisticated aerial photography to capture and seize the details of Dow's commercial structures and activities which were not otherwise accessible from the ground and which were not visible to the human eye from an aerial perspective (Pet. App. B-27). The method or perspective of the government's constitutionally offensive scrutiny is of no great moment. Intrusive surveillance through a wire, through a horizontal window, or as in this case, through a vertical "window," are all patently unconstitutional.

The Court of Appeals destroys Dow's Fourth Amendment rights by characterizing the items, and equipment and activity Dow seeks to protect as "outdoor spaces between plant buildings" (Pet. App. A-4) and the intrusive, aided surveillance as mere "observation" (Pet. App. A-8). Dow seeks to protect the details and technology of its outdoor plants, *not* outdoor "spaces." The Court of Appeals disregards the fact that we are dealing with *open-air plants* comprised of a few "traditional buildings" integrally and inherently related to the larger, contiguous open-air manufacturing equipment (Photographs 1-5, Sealed Joint Appendix).

The decision attempts to conform to existing laws by recognizing that Dow does have a reasonable expectation of privacy from ground intrusion — that is, Dow's facility is not an open field at ground level (Pet. App. A-8). That finding and Dow's Fourth Amendment rights are then eviscerated by holding that Dow's facility is an

open field from the air (Pet. App. A-9). An area cannot be an open field from one perspective but not from another. Also, Fourth Amendment rights from a terrestrial intrusion are hollow if a more intrusive, and less particularized search method such as aerial photography is available at the sole discretion of government agents.

Dow's Fourth Amendment right to be free from unreasonable searches and seizures has been violated. Dow requests that the decision of the Court of Appeals be reversed.

III.

Without citation to legal authority and despite the plain language of Section 114(a) of the Clean Air Act [42 U.S.C. § 7414(a)], the Court of Appeals held that the statute does not foreclose EPA's use of aerial photography as a site inspection technique (Pet. App. A-14).

The holding is patently wrong since it both defies the plain meaning of the statutory language and ignores the fact that it is a physical impossibility for aerial photography to accomplish *any* of the prerequisites or purposes specified by the statute. *United States* v. *American Trucking Associations, Inc.*, 310 U.S. 534, 543 (1940); *Donovan* v. *Dewey*, 452 U.S. 594, 599 (1981).

Under the government's interpretation of Section 114, whereby any inspection technique that is not clearly foreclosed is fair game, surreptitious inspections could be conducted at any time and with any frequency as the Agency deems necessary. A statutory interpretation could scarcely be more broad, more susceptible to abuse of discretion, or more unreasonable.

Those charged with an investigative and prosecutorial duty should not be the sole judge of when to utilize constitutionally sensitive means in pursuing their tasks.

Almeida-Sanchez v. *United States*, 413 U.S. 266, 280 (1973). Official powers cannot be assumed or extended by administrative agencies beyond the terms and necessary implications of the statutory grant. They must be conferred by Congress. *Federal Trade Commission* v. *Raladam Company*, 283 U.S. 643, 649 (1931).

The EPA's use of aerial photography as a site inspection technique does not conform to the plain language of the Clean Air Act or to Congressional intent. The Agency exceeded its statutory grant of limited authority. Dow requests that the decision of the Court of Appeals be reversed.

ARGUMENTS

It is axiomatic that commercial and industrial establishments have a reasonable expectation of privacy and are entitled to Fourth Amendment protection in their non-public areas. *Marshall* v. *Barlow's Inc.*, 436 U.S. 307 (1978); *G.M. Leasing Corporation* v. *United States*, 429 U.S. 338, 353 (1977); *Air Pollution Variance Board* v. *Western Alfalfa Corporation*, 416 U.S. 861 (1974); *See* v. *City of Seattle*, 387 U.S. 541 (1967); *Katz* v. *United States*, 389 U.S. 347 (1967); and *Oliver* v. *United States*, 80 L.Ed.2d 214 (1984). The Court of Appeals' opinion is a radical departure from those cases.

The primary legal difference between the District Court Opinion (Pet. App. B), and the Court of Appeals Opinion (Pet. App. A), is that the District Court found that EPA's actions were a search and the Court of Appeals held they were not.

The Court of Appeals acknowledged that "If the government action in this case — EPA's aerial photography of Dow Chemical's Midland, Michigan plant —

constitutes a Fourth Amendment 'search', then *Barlow's* controls, and EPA's warrantless search violated Dow's Fourth Amendment rights" (Pet. App. A-5).

I.

EPA's INTRUSIVE AERIAL PHOTOGRAPHY WAS A SEARCH.

A. A Secured, Developed Industrial Facility Is Not An Open Field.

In *Hester* v. *United States*, 265 U.S. 57, 59 (1924), the Court held "[T]he special protection accorded by the Fourth Amendment to the people in their 'persons, houses, papers and effects,' is not extended to the open fields. The distinction between the latter and the house is as old as the common law."

Fourth Amendment protection extends to "the portions of commercial premises which are not open to the public." *See* v. *City of Seattle*, 387 U.S. 541, 545 (1967). The businessman has a constitutional right to go about his business free from unreasonable official entries upon his private commercial property. *See* v. *City of Seattle*, *supra* at 543; *Marshall* v. *Barlow's, Inc.*, 436 U.S. 307, 312 (1978).

The "portions of commercial premises not open to the public" and "open fields" would seem to be mutually exclusive under the common understanding of those terms. Certainly both the facts and photographs* in this case clearly confirm that the Dow Midland facility is a secured, developed industrial facility and not an open field in either a legal or factual sense.

The rule of *Hester* that "an individual may not legitimately demand privacy for activities conducted out of

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* *See* Photographs 1-5, in the Sealed Joint Appendix, and in the Record per Dist. Ct. Dkt. 15 and 171.

doors in fields, except in the area immediately surrounding the home" was reaffirmed in *Oliver* v. *United States*, 80 L.Ed.2d 214, 224 (1984). The *Oliver* decision did not affect the reasonable expectation of privacy of open-air industry in accord with *See*, *Barlow's* and *Katz*, which hold that secured, developed plant sites are enclaves which are free from arbitrary government interference. The Court in fact reconfirmed the reasonable expectation of privacy in the industrial setting. Discussing the traditional sanctity of the home, the Court noted that "The Fourth Amendment's protection of offices and commercial buildings, in which there may be legitimate expectations of privacy, is also based upon societal expectations that have deep roots in the history of the Amendment" (cites omitted). *Oliver*, 80 L.Ed.2d at 224, n. 8.

In discussing the distinction between open fields and the settings or types of activities where there is a societal interest in protecting privacy, the Court noted that open fields "usually are accessible to the public and the police in ways that a home, an office or commercial structure would not be." *Oliver*, 80 L.Ed.2d at 224. The Dow manufacturing facility is a secured commercial structure to which the public and the police do not have general access.

Dow asserts that its open-air plants are commercial structures and subject to Fourth Amendment protection. Even if "structure" is defined to be "closed," various courts have recognized a business curtilage for areas entitled to Fourth Amendment protection because of proximity and relationship to a closed structure. *United States* v. *Swart*, 679 F.2d 698, 702 (7th Cir. 1982) [open-air business premises where cars held to be within the curtilage of business buildings]; and *Wattenburg* v. *United States*, 388 F.2d 853 (9th Cir. 1968). *See also, United States*

v. *FMC Corp.*, 428 F.Supp. 615, 618 (W.D.N.Y. 1977), *aff'd* 572 F.2d 902 (2nd Cir. 1978), where the District Court found that the highly restricted access to an industrial lagoon and the manner in which it was enclosed (8 ft. fence) did not permit application of the "open fields" exception.

The Court of Appeals found that "Dow had a kind of actual privacy expectation . . . to be free from ground level intrusions from the street" (Pet. App. A-8). However, the Court also held the Dow plant is "like an open field" as far as aerial observations are concerned (Pet. App. A-9). The Dow plant is not "like an open field."

It is contrary to common sense and public policy that an industrial facility could be deemed to be an open field from the sky, but not from the ground. An area is either an open field or it is not. It cannot logically be both. Having Fourth Amendment rights at ground level is meaningless if a more intrusive, non-particularized, surreptitious search method such as aerial photography is available without restriction upon government agents.

Until the Court of Appeals' decision, a secured and developed industrial facility had *never* been held to be an open field. The District Court specifically rejected the applicability of the open fields exception to this case (Pet. App. B-6, n. 5). Since *Hester* v. *United States*, 265 U.S. 57 (1924), the open fields doctrine has been generally applied to rural, agricultural land. "Field" has been interpreted well beyond its literal meaning to include wooded areas, deserts, vacant lots in cities, and open beaches, but *never* a developed, secured industrial complex. *See*, La Fave, Search and Seizure § 2.4 at 332 (1978). In those cases the land is "developed" only in an agricultural sense. The security and expectation of privacy question usually revolves around agricultural-type fencing and posting.

In *Oliver* v. *United States*, 80 L.Ed.2d at 225, n. 11, the Court noted that "An open field need be neither 'open' nor a 'field' as those terms are used in common speech. . . . a thickly wooded area nonetheless may be an open field." The Court adds to the clarification in the same footnote "It is clear, however, that the term 'open fields' may include any *unoccupied or undeveloped area* outside of the curtilage" (emphasis added). Occupied and developed areas, such as the Dow manufacturing facility, are not open fields in a legal or factual sense.

In its opinion the Court of Appeals found that the District Court erred in dismissing the government's "open field" argument (Pet. App. A-9). In its limited citation to *Hester* v. *United States*, 265 U.S. 57 (1924) in the District Court (Dkt. No. 165, pp. 14-15) and in the Court of Appeals (Appellant's Brief, p. 12), the government used *Hester* and *Air Pollution Variance Board* v. *Western Alfalfa Corp.*, 416 U.S. 861 (1974), to argue that observations* *from* public places (the sky) are constitutionally permissible. The government did not pointedly argue that the place its observations were directed *to*, that is, Dow's Midland facility, was an "open field." The Court's decision went far beyond both the government's position and the law.

If complex manufacturing facilities are deemed to be open fields in which the owners have no reasonable expectation of privacy with respect to visually enhanced intrusions, then companies such as Dow would have difficulty asserting that their technology discernible through such visually enhanced means has been maintained secret. Making reasonable efforts to maintain the

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* The government consistently mischaracterized its detailed, intrusive surveillance photographs as mere "observations." The District Court found that ". . . the camera saw a great deal more than the human eye could ever see" (Pet. App. B-27).

secrecy of a trade secret is a condition precedent to alleging that information or technology in fact constitutes a protectable trade secret. *Kenawee Oil Company* v. *Bicron Corporation*, 416 U.S. 470, 476 (1974). Trade secrets require a context of privacy, or at least the possibility of privacy, for their existence. A threat to Dow's privacy threatens its very existence and integrity as a scientific, technological and research-based company.

Dow's expectation of privacy in the minute details in the heart of its open air plants is both deemed reasonable and supported by society and shared by others in similar circumstances. *See* pages 47-49 for a brief discussion of tort and criminal laws protecting trade secrets and privacy.

Other corporations, which unlike Dow were given notice of EPA's contemplated aerial photography of their plants, responsed with similar concern (A. 86-93). FMC Corporation responded in part that ". . . the standard inspection/right of entry provisions from the various water, air, hazardous waste, and toxic substances statutes . . . do not authorize the proposed surveillance and photographing" (A. 89). Monsanto objected to aerial photography of its facilities ". . . to protect valuable proprietary information, which would be disclosed by such aerial photography. In addition, such aerial photography would violate the prohibition against unreasonable searches . . ." (A. 92).

The wide-spread ramifications of holding that a multi-million dollar developed and secured industrial facility is an open field, and hence outside of the protection of the Fourth Amendment, is especially grim. Protection of industrial privacy and trade secrets from sophisticated surveillance into open-air operations is lost. The potential for abuse by the government is manifest. Searches will be indiscriminate with no judicial authorization, no restraint

on frequency, and no restraint on the nature or scope of the surveillance.

The Court of Appeals, in reversing the District Court, condoned the violation of Dow's right to be protected against unreasonable search and seizure as guaranteed by the Fourth Amendment, and granted the government *carte blanche* to conduct general searches contrary to existing constitutional restraints and legislative direction.

In view of this Court's decisions in *Katz* v. *United States*, *Marshall* v. *Barlow's Inc.*, *Air Pollution Variance Board* v. *Western Alfalfa*, and *Oliver* v. *United States*, the open fields doctrine was misapplied and Dow's reasonable, constitutionally justified, expectation of privacy was violated.

B. The Open Fields Doctrine Has No Application To Cases Where Sophisticated, Intrusive Surveillance Devices Are Employed.

The open fields doctrine must be limited both to the nature of the site inspected and to the unaided or unenhanced viewing application of *Hester* and *Oliver*. As Justice Brandeis cautioned in his dissent in *Olmstead* v. *United States*, 277 U.S. 438, 473 (1928), and as the Court accepted in *Katz*, 389 U.S. 347 (1967), the Fourth Amendment must be capable of wider application than the mischief which gave it birth. Aided and enhanced government surveillance falls squarely within the scope of the Fourth Amendment; it does not transform the activity or object under surveillance into an open field.

Air Pollution Variance Board v. *Western Alfalfa Corp.*, 416 U.S. 861 (1974) holds that a government agent can go to areas where the public is not excluded and view whatever is exposed to the public. The public is not excluded from the sky. However, the "view exposed to the public"

must mean an unenhanced, "naked eye" view*. An intrusive view, just like the intrusive ear in *Berger* v. *New York*, 388 U.S. 41 (1967), and in *Katz*, is tortious or criminal per the public and unconstitutional for the government.

Citing to *Hester*, the Court in *United States* v. *Kim*, 415 F.Supp. 1252, 1256 (D.Ha. 1976) [telescopic observation into an apartment an unreasonable search], held that in light of the powerful technology used by the government, "the 'plain' in plain view must be interpreted as permitting only an unaided plain view." *See also, United States* v. *Lace*, 669 F.2d 46, 51, 55 (2nd Cir. 1982), *cert. den.* 459 U.S. 854, and *United States* v. *Taborda*, 635 F.2d 131, 139 (2nd Cir. 1980) [telescopic intrusions into homes unconstitutional].

The current law that any enhanced, intrusive viewing into a place where people have a reasonable expectation of privacy, such as the private portions of developed industrial property, is unconstitutional is correct and should not be overturned in this case. Technology exists and is being developed which can make a closed room an "open field." As the Court in *Kim, supra* at 1257, recognized ". . . as the technological capability of law enforcement agencies increases, the Fourth Amendment must likewise grow in response."

In a general discussion on the open fields exception, a former EPA assistant regional counsel posits:

> The recently filed Dow Chemical case against EPA . . . seems to involve a fact situation where

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* *See also* Justice Rehnquist's concurring opinion in *Donovan* v. *Dewey*, 452 U.S. 594, 608-609 (1981), which states: "As far as I can tell, the stone quarry here was largely visible to the *naked eye* without entrance onto the company's property. . . . the Fourth Amendment is not extended to the open fields" (emphasis added). The open fields concept makes good sense and good policy only in the naked eye context (including minor visual aids such as glasses).

> the open fields exception may have some applicability. However, aerial surveillance would seem to push the exception too far.
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> * * *
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> The important question that has to be faced is what is constitutionally offensive scrutiny. It would be fallacious to extend the open fields exception to the facts in Dow because if it were, advanced technology has given us microphones and cameras that can make an enclosed room an "open field." Spatially based criteria of eligibility for fourth amendment protection ignore the pertinent question as to what it is we wish to see preserved from the offensive scrutiny.

Martin, *EPA and Administrative Inspections*, 7 Fla. St. L.R. 123, 134 n. 50 (1979).

The offensiveness of the scrutiny is apparent from the facts. After entry for a repetitive inspection was denied, and without seeking judicial oversight as required by Section 113 of the Act (42 U.S.C. § 7413), EPA embarked upon a targeted surveillance mission that produced aerial photographs capturing detail that is absolutely beyond the perception of the unaided human eye or mind (Pet. App. B-27).

Enforcement officers can observe (unaided) the perimeter or exterior or plainly visible aspects of a home, factory or apartment as much as they want. *Air Pollution Variance Board* v. *Western Alfalfa Corp., supra; Marshall* v. *Barlow's Inc., supra.* In fact, the EPA deployed a smoke reader to the Dow facility after the September 1977 inspection and before the February 1978 flyover (Smith Depo., Exh. 1, p. 2, Dist. Ct. Dkt. 29). However, when the government uses observation or detection aids to intrude in minute detail into the interior areas of a

protected place, that action is unconstitutional. *United States* v. *Taborda, supra,* 635 F.2d at 137; *United States* v. *Kim, supra; United States* v. *Lace, supra.*

As the Court in *Katz* v. *United States, supra,* 389 U.S. at 351, recognized: "What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection. [Cite omitted.] But what he seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected".

Intrusive aids which overcome reasonable expectations of, or reasonable attempts to preserve, privacy cannot be sanctioned. They are repugnant to the Fourth Amendment.

C. EPA's Intrusion Infringed Upon The Personal And Societal Values Protected By The Fourth Amendment.

At the November 12, 1981, oral argument in the District Court on cross motions for summary judgment, the government admitted "All the Fourth Amendment cases involve a search for evidence. Of course that's what the government was doing, we don't deny that" (A. 94).

Apart from that admission, the facts of this case establish that EPA's deliberate, detailed examination of the Dow property by sophisticated aerial photography, which was calculated to produce evidence in an enforcement action that was concurrently referred to the Department of Justice (A. 31, 32), constituted a search.

The government's intent in making the observation or examination is a deciding factor. The fact that visual enhancement was employed, especially when it produced and "captured" images beyond the capabilities of the human senses for possible use as documentary evidence,

is a noncontrovertible indication that the agency engaged in a search.

> It has been noted by one commentator that the critical factor in deciding whether a search has occurred is the mental processes of the searcher. A functional observation occurs when the officer engages in a mental quest for evidence of crime and relies on his observation to assist in the quest. In this instance, the observation is a search.

Grange, *Visual Remote Sensing and Privacy Interests of the Fourth Amendment*, 1 Northrop U.L.J. of Aerospace, Energy & Environment 33, 51-52, n. 129 (1979).

In determining whether there was a search, the Court of Appeals focused on two queries: 1) whether EPA's aerial photography was sufficiently intrusive to constitute a search; and 2) whether the aerial photography intruded upon Dow's actual and reasonable expectation of privacy in the spaces between its buildings (Pet. App. A-5, 6). Relying on factual errors and a mischaracterization of Dow's expectation of privacy and overlooking the intrusion in this case (discussed at pages 32-33, 35-39), the Court of Appeals found that the Dow plant was "like an open field," and thus found a "non-search for Fourth Amendment purposes" (Pet. App. A-9).

The intrusion in this case is directly comparable to other methods of intrusive searches. For instance, in *United States* v. *Kim*, 415 F.Supp. 1252, 1256 (D.Ha. 1976), which involved a motion to suppress evidence derived from telescopic surveillance through the window of an apartment, the Court stated "It is inconceivable that the government can intrude so far into an individual's home that it can detect the material he is reading and still not be considered to have engaged in a

search." Here, the EPA intruded into Dow's facility so far that items and equipment as small as ½ inch in diameter are depicted (A. 53-54). "It is of the utmost significance . . . that the sophisticated visual aids available to the government can intrude on individual privacy as severely as electronic surveillance in *Katz*, or the wire tapping in *Berger* v. *State of New York*, 388 U.S. 41 (1977)." *United States* v. *Kim*, *supra* at 1255-56.

In *United States* v. *Taborda*, 491 F.Supp. 50, 53 (E.D. N.Y. 1980), the Court cited *Katz* in suppressing evidence obtained by means of a high-powered telescope aimed through the window of a home, stating:

> This court reads the *Katz* case to mean, as a minimum, that the people may demand privacy unless a policeman can see or hear them from a place accessible to those members of the public not preternaturally inquisitive. . . . the court [*Katz*] must have meant by "public" the ordinary run of people, not those who happen to possess powerful and sophisticated devices and curiosity to use them to spy on their fellows.

In affirming that opinion, the Second Circuit held that to the extent that agents used a telescope to identify objects or activities that could not be identified without it, those observations were searches. *United States* v. *Taborda*, 635 F.2d 131, 139 (2nd Cir. 1980). In this case the camera saw a great deal more than the human eye could see (Pet. App. B-27).

> Most people would regard [video surveillance], standing alone, as even more intrusive than interception of oral communications, which is subject to the strictures of Title III of the Omnibus Crime Control and Safe Streets Act of 1968 [18 U.S.C. 2510 *et seq.*].

In the Matter of An Application Of the United States for an Order Authorizing Interception Of Oral Communications And Video-Tape Surveillance, 513 F.Supp. 421, 423 (1980).

Aerial visual surveillance is no exception since the reasonable expectation of privacy is not earthbound. In finding that the owner of a ¾ acre marijuana patch had no reasonable expectation of immunity from overflight, the Court in *Dean* v. *Superior Court*, 35 C.A.3d 112, 116, 110 Cal. Rptr. 585 (1973), stated: "The Fourth Amendment guards the privacy of human activity from aerial no less than terrestrial invasion."

Noting that a prime measure of the reasonableness of expectation of privacy is mankind's common habits in the use of domestic and business property, the *Dean* Court posits:

> One who builds a swimming pool and sunbathing area in his backyard expects privacy (hence immunity) from aerial inspection. Areas reasonably used in ordinary business operations are assumedly entitled to similar immunity. Such areas are expectedly private according to the common habits of mankind.

35 C.A.3d at 117.

Dow believes that those and similar decisions reflect both the public's expectations and sound Fourth Amendment analysis.

As applied to this case, the EPA's intentional discernment and capturing of minute details of Dow's outdoor commercial structures and activities which were *not visible without optical aid*, was clearly a search. The government's intrusion infringed upon the personal and societal values protected by the Fourth Amendment.

II.

THE INTRUSIVE AERIAL PHOTOGRAPHY VIOLATED DOW'S ACTUAL AND REASONABLE EXPECTATION OF PRIVACY.

The Court of Appeals did find that Dow had an expectation of privacy at ground level:

> Here Dow had an actual expectation of privacy in certain parts of its plant, privacy which included the freedom from certain kinds of intrusion. Dow took great pains to be free from ground level intrusion by building a perimeter security fence and employing security guards. 536 F. Supp. at 1364-65. Hence, Dow had a kind of actual privacy expectation in these parts of its plant, a privacy interest to be free from ground level intrusions from the street.

(Pet. App. A-8).

Despite its finding of a reasonable expectation of privacy at ground level, the Court of Appeals abandoned consistency and found that Dow had no reasonable expectation of privacy from the air. To reach this remarkable conclusion, the Court ignored the distinction between mere aerial observation and detailed aerial photography, held that EPA's admitted search was not a search at all, held that Dow's security measures to protect against aerial photography were nonexistent, found that the Dow facility was on an airport flight pattern despite no support in the record, and held the secured, developed industrial complex to be an open field from the air.

> The reasonableness of a search is . . . [to be determined] by the trial court from the facts and circumstances of the case and in the light of the "fundamental criteria" laid down by the Fourth

> Amendment and in opinions of this Court applying that Amendment.

Ker v. *State of California*, 374 U.S. 23, 33 (1963). The District Court understood the facts and circumstances of the case and found a search. The Court of Appeals misapprehended a number of material facts and circumstances in reaching its decision that there was no search. Those outcome determinative factual errors and omissions are discussed below.

A. Dow's Reasonable Expectation Of Privacy

In support of its opinion that Dow had no expectation of privacy from aerial observation, the Court of Appeals found that "Dow did not take any precautions against aerial intrusions, even though the plant was near an airport and within the pattern of planes landing and taking off" (Pet. App. A-8).

Dow does take precautions against aerial intrusion. As described at pages 9-10, since World War II it has been a specific job responsibility of Dow Security people to watch for, report and follow up on suspicious aircraft over the plant (A. 13-14, 21-22; Kelyman Depo. p. 26, Dist. Ct. Dkt. 131).

The finding that the plant is near an airport and within take-off or landing patterns, is not supported in the record and appears to be an extension of Dow's acknowledgement that planes (undefined number and frequency) fly over its Midland facility (A. 76-77). Planes criss-cross this nation every day; most create no cause for concern. However, assuming for the sake of issue resolution that the finding is correct, it neither aids nor detracts from Fourth Amendment analysis. The location, and the size, of the place being searched is not an element of Fourth Amendment analysis. The "location"

theory of *Olmstead* v. *United States*, 277 U.S. 438 (1928) was overruled in *Katz* v. *United States*, 389 U.S. 347 (1967), which holds that the Fourth Amendment protects people, not places.

If being "near" an airport is sufficient to strip a person of an otherwise reasonable expectation of privacy, then millions of homes and businesses in this country would suddenly be deprived of Fourth Amendment protection*. Population centers, including residential and commercial properties, and airports tend to be found near one another.

Although the Court of Appeals does recognize that "[c]ertainly, no one could reasonably expect Dow to build a dome over its entire Midland plant . . .", the Court posits that "Dow could have shielded the critical spaces in between its buildings, if it had an actual expectation of privacy from aerial observation of these regions" (Pet. App. A-8). Dow's expectation of privacy is in the minute details in the non-public, internal portions of its open-air facilities from visually enhanced surveillance, *not* in "spaces in between its buildings" or from mere "observations." The small size and detail of items and equipment of concern to Dow is not visible from a distant, moving unaided aerial view. To suggest that Dow must shield minute detail, detected during a government quest for evidence with a certified mapping camera, to preserve its privacy is the antithesis of the Fourth Amendment.

In addition to annihilating the Fourth Amendment protection for open air industry, the Court of Appeals

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* Using the proximity of an airport and the passage of "other" aircraft as a factor in assessing the reasonableness of an expectation of privacy is also misplaced since the Fourth Amendment protects against governmental, not private, intrusions. *Katz* v. *United States*, 389 U.S. 347, 352 (1967).

decision wreaks havoc on protection for the home and its attendant curtilage. Due to the nature of aerial photography, where the camera is switched on and the run is made, the area depicted (searched) cannot be described with any sense of particularity before the fact. In this case not only was Dow's entire 2,000 acre facility photographed (the "targets" were the two powerhouses and the incinerator), but other commercial properties and homes in Midland were also captured on the detailed photographs. What protective measures should a homeowner take to protect the privacy in a fenced yard against aerial surveillance?* None. It is unreasonable to require citizens, be they individuals or corporations, to take steps to protect their privacy from illegal surveillance by the government when the government is doing something it ought not do.

If an individual or a corporation has a legitimate expectation of privacy in a place, such as a home or a commercial structure, constitutional protection against unwanted entry or surveillance is not forfeited if he fails to take some action to *totally* secure the place. The unlocked front door, the undrawn shade, and the uncovered open-air plant are indicia of our free society and *not* invitations for government surveillance. The protections of the Fourth Amendment are not forfeited by lack of a perfect security system. It would be unreasonable to force citizens to additionally protect what the constitution already protects.

The expectation of privacy only has to be reasonable, not total. The law protects the reasonable expectation of privacy, not the perfect security system. The perfect security system has no need for protection. If achievement

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* An explanation that the homeowner was not the target is akin to telling the wounded innocent that the government was actually shooting at a fleeing subject.

rather than expectation of privacy were the only thing protected by the Fourth Amendment, then that Amendment would be a nullity.

B. Mischaracterization Of "Interior Regions Of The Plant" And "Mere Aerial Observation"

"Interior regions of the plant" are the structures both inside of and not visible from the fenceline — *not* outdoor spaces between plant buildings. The District Court noted that it had carefully examined all the photographs and was struck by their vivid detail and resolution (Pet. App. B-3). The Court found that "Many of these minute, but observable items are located in *interior* regions of the plant which are surrounded by buildings and other structures which make observations from anywhere but *directly above*, a near physical impossibility" (Emphasis in the original) (Pet. App. B-3). The District Court also found that "The photographs depict *internal* regions of the plant in such vivid detail, capable of further enlargement and magnification, as to defy simply being described as views of the *exterior* of the facility" (Emphasis in the original) (Pet. App. B-22). "[T]he camera saw a great deal more than the [unaided aerial] human eye could ever see" (Pet. App. B-27).

Despite both the District Court's factual findings and its own opportunity to view the photographs, the Court of Appeals without explanation redefined the phrase "interior regions of the plant" to mean "the open, outdoor spaces between plant buildings" (Pet. App. A-4). That characterization completely misses the mark and is not supported in the record. Yet it is repeated many times in the opinion (Pet. App. A-6, 8, 9, 10, 11, 12 and 13), and Dow believes, is a major factor in the reversal of the District Court decision.

The Court of Appeals' characterization of Dow's expectation of privacy as referencing the "spaces between its buildings" both supplies its own answer concerning reasonableness and makes Dow's position appear ridiculous. Dow is not trying to protect *space* between its buildings; rather, Dow is trying to protect the details of its open-air commercial structures which are located inside its secured fenceline (A. 62, 68).

The Court of Appeals disregarded the complex mass of pipes, vessels and equipment which comprise Dow's outdoor manufacturing areas which are neither buildings nor open spaces between buildings. Those multi-million dollar outdoor plants are the basis of Dow's business, its competitive edge, and the technological fruits of its inventors and engineers. They are protected by Dow's multi-million dollar security system and our legal system.

The Court of Appeals found that "Dow's reasonable privacy interest in the interior of its buildings does not extend into the areas between the buildings because, unlike the home setting [curtilage], there is no compelling reason in terms of privacy to justify this extension" (Pet. App. A-12). That finding ignores the integral and inherently related functions of the covered buildings, *e.g.* a control room, and the contiguous and connected pipes, vessels and equipment which comprise the operating plant. The buildings and the contiguous, open-air process areas are as interrelated as the human mind and body. They are mutually dependent and interrelated.

A review of the EPA aerial photographs (Photographs 1 and 2 — Sealed Joint Appendix; *see also* photographs in the Record per Dist. Ct. Dkt. 15), clearly shows that the representative brine chemical plant is not comprised of buildings and open spaces between buildings, as perceived by the Court of Appeals. Rather, the 30 acre plant (A. 74) is comprised of only two "traditional"

buildings with no discernible "open space" between them and the rest of the commercial structure, that is, the web of pipe, tanks, vessels, utilities, and technical process equipment that comprise the brine chemicals plant (Photographs 1, 2 and 4 – Sealed Joint Appendix). Some of the trade secret aspects of the plant that are visible on the photographs were discussed during deposition (Wait Depo., Vol. 1, pp. 112, 115-118, 122, 126, 131, 135-137, Dist. Ct. Dkt. 152 – under seal; Wiseman Depo. pp. 43-46, 60-65, 67-68, 70, Dist. Ct. Dkt. 255 – under seal). The photographs reveal trade secrets and technology that is unique to Dow (*e.g.*, Wiseman Depo. pp. 43, 44-46, 67, 70, Dist. Ct. Dkt. 255 – under seal).

Throughout its decision the Court of Appeals characterizes EPA's surveillance and detailed aerial photography as "aerial observation" and the "area observed" (Pet. App. A-8, 9). That characterization of casualness belies the facts in the case at bar. It also reveals a major misapprehension of the central contention of the Dow case.

Mere aerial observation (naked-eye) is akin to a government agent watching a house from a public park, or an EPA smoke reader observing a plume from a public right-of-way. *Air Pollution Variance Board* v. *Western Alfalfa*, 416 U.S. 861 (1974). Sophisticated aerial photography, which perceives and captures detail which is inaccessible to the unaided human eye or mind, is analogous to using a telescope or telephoto lens to peer into a structure to a degree where the details of human activity are visible. *Cf.*, *United States* v. *Kim*, 415 F.Supp. 1252 (D.Ha. 1976) [government use of telescope enabling agents to determine reading material of suspect through an apartment window is an unreasonable search], and *United States* v. *Taborda*, 635 F.2d 131 (2nd Cir. 1980) [enhanced viewing through a window into interior of a home with a high-powered telescope unlawful].

As a public policy and common sense matter, the location of the "window," that is, to the street or to the sky, does not matter. Once the human relations that create the need for privacy are established, the reasonable expectation of privacy is recognized and protected.

Since the inception of air flight, Dow has known that its plants are visible by people in aircraft. In fact, in the November 27, 1973, Dow Security directive on reporting planes over the plant it is clearly stated that "Management is very much concerned when other than commercial passenger flights pass over the plant property" (A. 14). Why no concern about commercial passenger flights? Because the view from a commercial plane is similar to that depicted in Photograph 3 in the Sealed Joint Appendix (Dist. Ct. Dkt. 168, Exhibit 7), which causes Dow no consternation. Other reasons include: commercial planes do not make multiple passes over the plant; commercial planes are not equipped with floor-mounted certified mapping cameras; and even if a passenger on a commercial flight went beyond mere aerial observation to aided photographic observation, between the oblique angle of vision and the multi-layer plastic airline window, the photograph would be similar to Photograph 3 in the Sealed Joint Appendix.

Other than both being photographs, there is no comparison between the resolution and detail of the EPA photographs and the typical "aerial observer" photograph (*cf.* Photographs 1 and 2 *versus* 3 in Sealed Joint Appendix), or the aerial photographs typically taken by the Michigan Department of Natural Resources (DNR) (Dist. Ct. Dkt. 167; A. 54), or other state or federal agencies. The contact scale of the EPA photographs is 1:2400 (1 in. equals 200 feet); the scale of a typical Michigan DNR photograph, such as the one used by EPA in the District Court (Dkt. 167), is 1:24,000 (1 in. equals 2,000

feet) (A. 54). The degree of detail depicted at a scale of 1:24,000 does not cause Dow concern.

The phrases "aerial observation" and "area observed" imply an unaided human eye. Dow would have no quarrel if the "area observed" was its 2,000 acre manufacturing plant or large parts thereof. But, it is materially inaccurate to characterize the capturing of every square inch on 2,000 acres of developed industrial property as the "area observed." It is neither area, which implies large size, nor observed. It is the scrutiny of minute detail not humanly possible without the use of sophisticated technology.

The EPA aerial reconnaissance photographs, which depict the inner workings of the open-air manufacturing plants within the fenced and secured Midland facility, are the product of extremely intrusive, aided and constitutionally offensive scrutiny. The photographs are the functional equivalent of technical process drawings and blueprints revealing the details of Dow technology (A. 61-62, 68) — the very heart of Dow's business.* EPA searched the interior regions of the Dow facility — areas where the public and government agents have no right to be. EPA "saw" the minute details of interior portions of the plant not merely by means of the aerial perspective, but through the aid of sophisticated visual enhancement and capture via aerial photographs.

C. The Search Was Unreasonable.

A fundamental purpose of the Fourth Amendment is to safeguard people from arbitrary government invasions of

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* The various perspectives offered by the photographs are in some respects better than two dimensional blueprints. The photographs show depth. Compare tanks and equipment depicted in Photographs 1 and 2, and also 4 and 5 in the Sealed Joint Appendix. *See also* Wiseman Depo. pp. 40-41, 60, Dist. Ct. Dkt. 255 – under seal.

legitimate privacy interests, and not simply those interests found inside four walls and under a roof. *Wolf* v. *Colorado*, 338 U.S. 25, 27 (1949); and *Boyd* v. *United States*, 116 U.S. 616, 630 (1886).

This Court has strictly construed any proposed abrogations of the privacy interest protected by the Fourth Amendment. "[S]earches conducted outside the judicial process, without prior approval by judge or magistrate, are *per se* unreasonable under the Fourth Amendment — subject only to a few specifically established and well-delineated exceptions." *Katz* v. *United States*, 389 U.S. 347, 357 (1967) (footnote omitted). *Schneckloth* v. *Bustamonte*, 412 U.S. 218, 219 (1973); *Coolidge* v. *New Hampshire*, 403 U.S. 443, 454-455 (1971). The government bears the burden of establishing that a warrantless search was conducted within the narrow confines of an established exception to the Fourth Amendment. *Coolidge*, 403 U.S. at 455.

The Court of Appeals stated that if the open fields exception does not apply, then the EPA's activity was an unreasonable search (Pet. App. A-5). Dow asserts that the open fields exception does not apply and that the search was unreasonable since, under the facts and reasoning stated above, Dow's reasonable expectation of privacy in the details of its secured commercial structures was violated by the government's calculated, intrusive surveillance.

Donovan v. *Dewey*, 452 U.S. 594 (1981), addresses the relationship between the Fourth Amendment and a specifically tailored and pervasively regulating statute and thus is not directly on point. However, *Dewey* does state that "Inspections of commercial property may be unreasonable if they are not authorized by law or are unnecessary for furtherance of federal interests." *Donovan* v. *Dewey*, *supra* at 599.

The aerial photography at issue was not authorized by law. *See* Dow's argument at pp. 41-49. Nor was the surreptitious aerial photography necessary to further federal interests. The purpose of the mission was to obtain documentary evidence of "excessive visible emissions" (A. 32). The photographs showed no plume (A. 31). In addition, without significant cost to the Agency and giving Dow full opportunity to protect its trade secrets, the Administrator could have requested, indeed required, Dow to ". . . provide such other information as he [EPA] may reasonably require." Section 114(a)(1), reprinted on p. 3.

Judged by a comparison of the severe intrusion on Dow's Fourth Amendment interests against the complete lack of promotion of legitimate governmental interests, the search in the case at bar is clearly unreasonable. *Delaware* v. *Prouse*, 440 U.S. 648, 654 (1979).

"Where Congress has authorized inspection but made no rules governing the procedures that inspectors must follow, the Fourth Amendment and its various restrictive rules apply" (cite omitted). *Donovan* v. *Dewey*, 452 U.S. 594, 599 (1981). Dow's Fourth Amendment right to be free from unreasonable search and seizure has been violated.

III.

SECTION 114(a) OF THE CLEAN AIR ACT DOES NOT AUTHORIZE, EITHER EXPLICITLY OR BY LACK OF PROHIBITION, THE USE OF AERIAL PHOTOGRAPHY AS A SITE INSPECTION TECHNIQUE.

The legislative grant of authority with respect to EPA's inspection function under the Clean Air Act is contained in Section 114(a), which is reprinted on pages 2-3.

The legislative enforcement/inspection scheme established by Congress in Section 114 of the Act consists primarily of self-reporting by owners and operators of permitted facilities and on-site inspections. Owners and operators are required by law to keep accurate emission reports. Those reports are then reviewed within the Agency to determine whether there has been a violation of the regulations (Beyer Depo. pp. 16-17, Dist. Ct. Dkt. 30).

EPA's on-site inspection authority is not *carte blanche*. In Section 114 Congress has specifically defined EPA's investigatory functions and powers with respect to Agency requests for information (Section 114(a)(1)), and inspections, monitoring, and entry (Section 114(a)(2)). Congress authorized EPA to conduct site inspections of the various regulated establishments as part of an overview and evaluation of the states' performance in implementing the Clean Air Act. Although the Act establishes a dual state-federal system of air pollution enforcement, the states have primary responsibility for enforcement of the national ambient air quality standards. *Chevron, U.S.A., Inc.* v. *Natural Resources Defense Council*, 81 L.Ed.2d 694, 704-705 (1984).

A. The Decision Is Inconsistent With Both The Plain Meaning Of The Statutory Language And Congressional Intent.

"[T]he starting point for interpreting a statute is the language of the statute itself. Absent a clearly expressed legislative intention to the contrary, that language must ordinarily be regarded as conclusive." *Consumer Product Safety Commission* v. *GTE Sylvania, Inc.*, 447 U.S. 102, 108 (1980). "There is, of course, no more persuasive evidence of the purpose of a statute than the words by which the legislature undertook to give expression to its wishes. Often these words are sufficient in and of themselves to determine the purpose of the legislation. In such cases we

have followed their plain meaning." *United States* v. *American Trucking Associations, Inc.*, 310 U.S. 534, 543 (1940) (footnote omitted); *see also, United States* v. *Oregon*, 366 U.S. 643, 648 (1961). The statute does not contemplate or authorize the use of aerial photography as a site inspection technique. The Court of Appeals erred in finding that the "language of Section 114 clearly does not foreclose this technique" (Pet. App. A-14).

Once the agency decides to inspect a facility the Administrator is both authorized and bound by Section 114(a). The EPA is required to present credentials before the inspection. The Administrator's inspection/entry authority is clearly limited to *entry to, upon, or through any premises*. Once on the premises, the inspector's authority and purpose is limited by Section 114 to: 1) the inspection of monitoring equipment or methods which are required under the Act; 2) the sampling of effluents which the owner or operator of the facility is required to sample under the Act; and 3) the examination of records which are required to be kept under the Act. It is physically impossible for the EPA to carry out any of the investigative purposes or functions, as defined or reasonably implied by statute, by use of overflights and aerial photography. The incongruity of the plain language of the authorizing statute and the use of aerial photography as a site inspection technique is depicted in the following diagram:

STATUTORY REQUIREMENTS CAA 114(a)(2)	STATUTORY REQUIREMENTS MET BY SURREPTITIOUS AERIAL PHOTOGRAPHY	
	Yes	No
(2) The Administrator . . . upon presentation of his credentials –		☑
(A) shall have a right of entry to, upon, or through any premises of such person . . . , and		☑
(B) may at reasonable times have access to and copy any records,		☑
inspect any monitoring equipment . . . , and		☑
sample any emissions which such person is required to sample . . .		☑

The physical impossibility of aerial photography to conform to the statutory prerequisites and purposes delineated by Congress in Subsection 114(a) clearly establishes not only that aerial photography is not expressly authorized, but also that the language of the statute actually forecloses the technique. Congress did not intend that the agency use remote surveillance as a method of site inspection.

The Court of Appeals' decision that the language of Section 114 does not foreclose the use of aerial photography as an on-site inspection technique is contrary to the plain meaning of the statutory language. *Consumer Product Safety Comm.* v. *GTE Sylvania, Inc.*, 447 U.S. 102, 108 (1980). It is also contrary to what little legislative history there is on the topic. In discussing EPA's inspection authority under Section 308 of the Clean Water Act [33 U.S.C. 1308], which is in *pari materia* with the inspection authority under the Clean Air Act, Congress stated: "As under the Clean Air Act, the Committee expects the authority to enter will be used judiciously and upon any challenge to entry the Committee expects the Administrator to obtain the necessary warrant." S. Rep. No. 92-414, 92nd Cong., 2nd Session, *U.S. Code Cong. & Ad. News* 3668, 3729. "Enter" and "challenge to entry" are subject to only one interpretation: Congress intended that inspections be conducted in a face-to-face, nonsurreptitious manner.

Congress has addressed the precise question at issue; that is, the manner and purposes of a site inspection under the Clean Air Act. Section 114(a)(2). Congress' unambiguously expressed intent must be given effect. *Chevron, U.S.A., Inc.* v. *Natural Resources Defense Council, Inc.*, 81 L.Ed.2d 694, 703 (1984). "If broader powers be desirable they must be conferred by Congress. They cannot be merely assumed by administrative officers; nor can they be created by the courts in the proper exercise of their judicial functions." *Federal Trade Commission* v. *Raladam Company*, 283 U.S. 643, 649 (1931).

B. The Court Of Appeals Cites No Legal Authority For Its Holding That The Language Of The Act Does Not Foreclose Use Of Aerial Photography As An Investigation Technique.

The District Court properly held that "Aerial surveillance and photography is not authorized, either expressly or impliedly, by Section 114 of the Clean Air Act" (Pet. App. B-44). The Court of Appeals agreed that "the statute does not expressly authorize enhanced aerial observation . . ." (Pet. App. A-14). However, some misplaced analogies were employed by the Court of Appeals to hold that ". . . the language of Section 114 clearly does not foreclose this technique" (Pet. App. A-14). Absolutely no legal authority was cited in the Opinion to support the reversal.

The analogies proffered by the Court of Appeals are inappropriate both factually and legally. First cited are non-site information-gathering techniques such as library research, employee interviews (presumably off-site) and off-site observations of the plant. These examples are not supportive of the holding since they do not entail observing on-site, internal details of an industrial facility.

Next is a comparison with "other law enforcement officers who use aerial observation in their work" (Pet. App. A-14)*. The vague, nonspecific assertion of the Court of Appeals that other enforcement officers use aerial observation without presenting credentials in advance completely disregards the fact that in Section 114(a) Congress has *specifically required EPA to present credentials* before making an inspection, and to accomplish specific purposes while inspecting.

Even if the EPA is denoted a law enforcement agency rather than an administrative agency, law enforcement

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* As stated above, mere aerial observation is not at issue; detailed, enhanced and memorialized aerial surveillance is.

agencies are bound by the Constitution and statutes which authorize and limit their activities. The government's assertion that all inspection techniques not specifically precluded by the Act are permissible runs afoul both of the clear statutory language and purpose, and of existing law. There is a close analogy between intrusive audio surveillance and intrusive optical surveillance. Both can be conducted surreptitiously. Extra-judicial wiretapping by government agents is illegal. *Berger* v. *New York*, 388 U.S. 41 (1967). *See*, Omnibus Crime Control And Safe Streets Act, 18 U.S.C. §2510 *et seq*. The EPA cannot employ wiretaps even though Congress did not forbid use of the technique in Section 114. The same is true of other constitutionally offensive scrutiny, such as intrusive aerial photography, which Congress did not specifically list as forbidden.

Other administrative agencies, such as OSHA, have regulations that add definition to the agency's statutory inspection authority. 29 C.F.R. § 1903 *et seq*. EPA has no comparable regulations guiding the discretion of its inspectors as to which establishments to inspect or what procedure to follow when entry is refused.*

The Court of Appeals' analogy to military investigators is especially inappropriate (Pet. App. A-14). Not only does the military operate under a different system of justice, but it is expressly prohibited from aiding in civilian law enforcement. 18 U.S.C. § 1385. Also, unlike the EPA, the military generally keeps its files from public scrutiny.

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* EPA does have an internal policy which states that *"Barlow's* clearly establishes that the owner does have the right to ask for a warrant under normal circumstances." EPA MEMORANDUM ON INSPECTION PROCEDURES, 41 Envir. Rptr. (BNA) 2451, 2452 (April 11, 1979); also at Dist. Ct. Dkt. 166.

C. The Decision Is Inconsistent With The Clean Air Act's Provision Protecting Trade Secrets And With Existing Tort And Criminal Law.

The decision of the Court of Appeals annihilates the protection for trade secrets offered by the Clean Air Act. Section 114(c) [42 U.S.C. § 7414(c)] and 40 C.F.R. § 2.201 *et seq.* provide that an owner or operator may designate information as confidential business information when the Agency acquires the sensitive information. The Agency's use of aerial photography abrogates any possible trade secret protection since the person photographed has no notice of the Agency's acquisition of the photographs and no opportunity to claim that the photographs contain confidential business information.

The decision is also counter to the criminal law on theft of trade secrets and the law of torts on misappropriation of trade secrets. The Restatement of Torts § 757 (1939) (Pet. App. C), is the basis of trade secret definition and protection. As recognized by this Court, "The law also protects the holder of a trade secret against any disclosure or use when the knowledge is gained, not by the owner's volition, but by some 'improper means,' Restatement of Torts § 757(a), which may include theft, wiretapping, or even aerial reconnaissance." *Kewanee Oil Company* v. *Bicron Corporation*, 416 U.S. 470, 475-476 (1974) (footnote omitted).

DuPont v. *Christopher*, 431 F.2d 1012 (5th Cir. 1970), *cert. den.* 400 U.S. 1024 (1971), cites the Restatement of Torts § 757 and discusses the tortious taking of trade secrets from a plant under construction by means of aerial photographs. In that torts context, the Court discusses public policy and a legal norm equally applicable here:

> We should not require a person or corporation to take unreasonable precautions to prevent another

> from doing that which he ought not do in the first place. Reasonable precautions against predatory eyes we may require, but an impenetrable fortress is an unreasonable requirement, and we are not disposed to burden industrial inventors with such a duty in order to protect the fruits of their efforts.

DuPont v. *Christopher, supra* at 1017.

The Uniform Trade Secrets Act (Pet. App. D), which was approved by the National Conference of Commissioners on Uniform State Laws in 1979, and which has been adopted by at least seven (7) states, is an appropriate index of society's values as reflected by the law. In part, a trade secret under the Uniform Act (§ 1(4)) must not be readily ascertainable by proper means, and subject to efforts that are reasonable under the circumstances to maintain its secrecy. The Dow trade secrets in its Midland facility are subject to reasonable security to maintain their secrecy and are *not* readily ascertainable by *proper* means. If the Court of Appeals' decision is allowed to stand, and the government is allowed to capture trade secrets by improper means, Dow's ability to reasonably protect its trade secrets will be placed in serious jeopardy.

Although Michigan has not yet adopted the Uniform Trade Secrets Act, Michigan Compiled Laws (M.C.L.) § 752.772 (Pet. App. E), makes it a crime to steal a trade secret. Photographs are explicitly recognized in M.C.L. § 752.771 (Pet. App. E), as one means of stealing trade secrets. It is also illegal to invade one's privacy by means of surveillance in Michigan. M.C.L. § 750.539a and d (Pet. App. E).

The intent of Congress and the statutory language are both clear. EPA's limited site inspection authority does not include aerial photography. The Court of Appeals cites neither legal authority nor compelling analogy in revers-

ing the District Court and holding that the Act does not foreclose aerial photography as a site inspection technique.

CONCLUSION

Dow does not dispute EPA's right, at reasonable times, to enter Dow property to inspect Dow's records or equipment required to be kept or maintained under the Act, or to sample emissions. In fact, in most instances Dow and EPA have developed excellent working relationships.

Dow is not interested in hindering EPA's valid inspection or enforcement efforts. But those inspection and enforcement efforts must be conducted both within the statutory authority granted by Congress and the Constitutional strictures against unreasonable searches and seizures. Intrusive, detailed aerial photography is not a valid inspection method. The laudable objectives of the Clean Air Act can be realized under procedures which pay due regard to the Fourth Amendment. Valid constitutional claims must be vindicated or the population as a whole suffers.

In the historic dissent in *Olmstead* v. *United States*, 277 U.S. 438, 479 (1928), Justice Brandeis cautioned:

> Experience should teach us to be most on our guard to protect liberty when the Government's purposes are beneficent. Men born to freedom are naturally alert to repel invasion of their liberty by evil-minded rulers. The greatest dangers to liberty lurk in insidious encroachment by men of zeal, well-meaning but without understanding.

As stated in a general discussion on privacy in the context of *Griswold* v. *Connecticut*, 381 U.S. 479 (1965):

> Protection of this private sector — protection, in other words, of the dignity and integrity of the individual — has become increasingly important as modern society has developed. All the forces of a technological age — industrialization, urbanization, and organization — operate to narrow the area of privacy and facilitate intrusions into it. In modern terms, the capacity to maintain and support this enclave of private life marks the difference between a democratic and a totalitarian society.

Emerson, NINE JUSTICES IN SEARCH OF A DOCTRINE, 64 Mich. L.R. 219, 229 (1965).

Privacy may generally be defined as the control we have over knowledge or information about ourselves. Surreptitious data collection by the government of the details of a person's activities entails a complete lack of control over the information and constitutes an invasion of privacy. To be deprived of control over what we do and who we are is the ultimate assault on liberty. Fried, PRIVACY, 77 Yale L.J. 475, 482-485 (1968).

For the reasons stated above, the Opinion of the United States Court of Appeals for the Sixth Circuit should be reversed.

Respectfully submitted,

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No. 84-1259

In the Supreme Court of the United States

OCTOBER TERM, 1985

DOW CHEMICAL COMPANY, PETITIONER

v.

UNITED STATES OF AMERICA

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

BRIEF FOR THE UNITED STATES

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QUESTIONS PRESENTED

1. Whether the Environmental Protection Agency (EPA) violated the Fourth Amendment by contracting with a private company to take aerial photographs of a chemical plant from public navigable airspace with standard aerial camera equipment.

2. Whether the procurement of aerial photographs of chemical plants by EPA exceeds its statutory authority.

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BRIEF FOR THE UNITED STATES

OPINIONS BELOW

The opinion of the court of appeals (Pet. App. A1-A14) is reported at 749 F.2d 307. The opinion of the district court (Pet. App. B1-B45) is reported at 536 F. Supp. 1355.

JURISDICTION

The judgment of the court of appeals was entered on November 9, 1984. The petition for a writ of certiorari was filed on February 7, 1985, and was granted on June 10, 1985. The jurisdiction of this Court is invoked under 28 U.S.C. 1254(1).

STATEMENT

1. Petitioner owns and operates a large chemical manufacturing facility in Midland, Michigan, which occupies approximately 2,000 acres in an area that is characterized by light to medium development. Petitioner's plant is located near an airport, and commercial aircraft frequently pass over and near the property. At the Midland location, petitioner owns and operates two power plants known as the South Side Power Plant and the West Side Power Plant. Pet. App. A9, B2.

In late 1977 and early 1978, enforcement officials of the Environmental Protection Agency (EPA) were gathering information concerning emissions from these power plants with the intention of bringing an enforcement action under the Clean Air Act, 42 U.S.C. 7401 *et seq.* EPA officials made an on-site inspection of the power plants in September 1977, but petitioner refused to accede to a subsequent request for a second inspection. Pet. App. A2. Thereafter, EPA enforcement officials decided to obtain aerial photographs of petitioner's Midland power plants in order to attempt to visualize the emissions from the stacks, to see the layout of the facilities, and to look at the effects of emissions on surrounding vegetation (J.A. A30). They contacted EPA's Environmental Monitoring and Surveillance Laboratory (EMSL) in Las Vegas, Nevada, and ordered the photographs. EMSL, in turn, contracted with Abrams Aerial Survey Corporation (Abrams), a local aerial photography business, to take photographs of the Dow plant. Pet. App. A2.

On February 7, 1978, an Abrams employee flew over petitioner's facility and took photographs. These

photographs were taken when the airplane was flying at altitudes of 12,000, 3,000 and 1,200 feet. The camera used was a Wild RC-10 aerial mapping camera with a six-inch lens and a focal length of 150 millimeters. The photographs taken at 1,200 feet show the plant at a scale of 1 inch to 200 feet. Abrams sent the undeveloped film to EMSL by courier service. There, EPA technicians developed the film and made several prints and enlargements of the power plants. The most detailed of the enlargements was a 2x enlargement of one of the photographs taken at the lowest altitude, resulting in a scale of 100 feet to the inch. See J.A. A42. The film and enlargements were then sent to EPA's Region V enforcement office in Chicago, Illinois. Pet. App. A3.

2. On March 15, 1978, petitioner brought an action for injunctive and declaratory relief against the United States and EPA. It alleged that aerial photography of its Midland plant violated its Fourth Amendment rights and deprived it of trade secret property interests in violation of the Fifth Amendment. Petitioner sought to obtain the photographs and to enjoin EPA's future use of aerial photography of the Midland plant. The court entered a temporary restraining order enjoining EPA from disseminating, releasing, copying, or duplicating the photographs or releasing information derived therefrom. Subsequently, the court entered a preliminary injunction, and the negatives and prints made by EPA were deposited, under seal, in the district court.[1]

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[1] Attorneys for the parties maintained access to the sealed exhibits. Petitioner's counsel took some of the film and had two frames (Nos. 8505 and 9506) enlarged 10x and 20x, resulting in a scale of 1 inch = 10 feet. These enlargements prepared by petitioner are contained in the Sealed Joint Appendix, photographs 4 and 5.

On April 19, 1982, the district court granted petitioner's motion for partial summary judgment and ruled that the aerial photography violated petitioner's Fourth Amendment rights.[2] First, the court ruled that because EPA admittedly was engaged in a "quest for evidence" (Pet. App. B6), the warrantless aerial photography was an unlawful administrative search. *Id.* at B5-B17. In the alternative, the district court analyzed the case under *Katz* v. *United States*, 389 U.S. 347 (1967), to determine whether petitioner had a reasonable expectation of privacy upon which EPA had infringed. It found that because petitioner had designed its plant so that some outdoor portions of the facility were not visible to a person standing on the ground at the plant boundary, it had an expectation of privacy in these outdoor facilities. The court also found that the aerial photography was a form of "visually enhanced surveillance" subject to special restriction because "EPA could later analyze [the photographs] under enlarged and magnified conditions" (Pet. App. B27). See *id.* at B17-B32. Finally, the district court ruled that the "open fields" doctrine did not apply when a property owner's expectation of privacy was objectively reasonable. In this regard, it relied (Pet. App. B32-B38) on the panel decision in *United States* v. *Oliver*, 657 F.2d 85 (1981), which was subsequently rejected both by the en banc court of appeals, 686 F.2d 356 (6th Cir. 1982), and by this Court, *Oliver* v. *United States*, No. 82-15 (Apr. 17, 1984).

The district court also ruled that Section 114 of the Clean Air Act, 42 U.S.C. 7414, which grants EPA

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[2] Petitioner's claims under the Fifth Amendment were later dismissed without prejudice by stipulation of the parties. C.A. App. 447-448.

inspectors the "right of entry to, upon, or through any premises" in certain circumstances, impliedly excluded EPA from using other techniques, such as aerial surveillance or photography, as an investigative tool. The court ruled that Congress intended that "only land-based inspections be utilized" (Pet. App. B44). Hence, it held that the overflights exceeded EPA's statutory authority. *Id.* at B39-B44. Accordingly, the court entered a permanent injunction against use of the photographs and against any future aerial surveillance and photography of petitioner's facility (*id.* at B45).

3. The court of appeals reversed (Pet. App. A1-A14). Looking to whether petitioner had a reasonable expectation of privacy in the areas in question, the court concluded that no reasonable expectation of privacy was invaded in photographing from the air the "outdoor spaces of a chemical plant" (*id.* at A13). The court reasoned that petitioner had exhibited no actual expectation of privacy from aerial observation of its large industrial plant (*id.* at A7-A8). Even if it had such an expectation, moreover, the court explained that society would not deem it to be reasonable (*id.* at A9):

> When the entity observed is a multi-building complex, and the area observed is the outside of these buildings and the spaces in between the buildings, and when the complex is near an airport and within the pattern of planes landing and taking off, it is difficult to see how a reasonable person would have privacy expectations in the outside of the buildings and the spaces between the buildings.

The court distinguished the open-air facilities involved here from petitioner's offices and enclosed fa-

cilities, where the Court recognized the existence of "strong expectations of privacy" (*id.* at A11).

The court of appeals also reversed the district court's ruling that the flights were unlawful because EPA was not authorized by statute to use aerial photography as an investigative technique. It ruled that Congress's delegation under the Clean Air Act of general investigative authority to EPA was sufficient statutory authority to conduct aerial observation that satisfied the Fourth Amendment. Pet. App. A13-A14.

SUMMARY OF ARGUMENT

I.

A. It is a truism of Fourth Amendment law that a government official is not "precluded from observing as an officer what would be entirely visible to him as a private citizen." *Texas* v. *Brown*, 460 U.S. 730, 740 (1983) (plurality opinion). Several decisions of this Court make clear that a prohibition on entry into a particular area is not equivalent to a prohibition on viewing that area from some other place where the officer may be without violating the party's property or privacy rights. Therefore, whether petitioner's outdoor facility is termed an "open field" or "curtilage" or something else, there is no constitutional bar to government agents' viewing it from a vantage point to which the public has access. Moreover, there is no constitutional requirement that the government have any patricular quantum of suspicion in so viewing private property, even if it is looking for something in particular and therefore in that sense conducting a "search." If a government attempt to obtain information does not infringe a legitimate expectation of privacy, it plainly is not an

"unreasonable" search, and there is no need to establish a basis for suspicion in order to satisfy the Fourth Amendment. In such circumstances, the fact that the government deliberately observes a person's visible property does not mean that it has conducted a "search" within the meaning of the Fourth Amendment.

B. The photographs involved here were taken from a plane flying in navigable airspace, above the minimum altitude, and thus in a region that has been designated by Congress as the equivalent of a public aerial highway. There is no legal or physical barrier to prevent anyone flying in navigable airspace from looking down into petitioner's outdoor facility, or indeed the curtilage of a home, while flying in one of the more than 260,000 aircraft registered in the United States. Thus, there is no legitimate expectation that outdoor activity will not be observed from the air. To the extent that this possibility of aerial observation constitutes a loss of privacy, it is lost to the public at large. No legitimate privacy interest would be served by imposing upon the government a special limitation on aerial observation; in Fourth Amendment terms, such observation by the government does not intrude into a legitimate subjective expectation of privacy.

The same principles apply when a photograph is taken from an airplane flying overhead. The photographs here were taken by a private contractor with standard, commercially available camera equipment. Any member of the public could have taken, or contracted for, such pictures. Moreover, government agencies regularly and routinely engage in aerial photography for mapping and other noninvestigative purposes. Thus, petitioner could have no legitimate expectation that its plant would not be photographed

from the air. In the absence of an intrusion into such a legitimate expectation of privacy, there is no constitutional prohibition on the use of technology to enhance human senses. See, *e.g.*, *United States* v. *Knotts*, 460 U.S. 276, 282 (1983) (beeper); *Lopez* v. *United States*, 373 U.S. 427, 439 (1963) (sound recording); *United States* v. *Lee*, 274 U.S. 559, 563 (1927) (searchlight, binoculars).

Petitioner contends that the level of detail potentially capable of being revealed by enlargement and magnification of the photographs taken for EPA establishes a Fourth Amendment violation, but this issue is not genuinely presented in this case. The enlargements of which petitioner complains were made by petitioner itself—of a portion of the plant and at a level of detail unnecessary to EPA's investigation. But the Fourth Amendment inquiry must focus on any privacy intrusion actually committed by the government, not on the potential intrusion that theoretically could result if the government were to take further steps. The fact that the government could obtain certain information by technologically enhancing the photographs it has taken should not be controlling if the government does not take such action. In any event, petitioner can have no legitimate expectation of privacy in details of its plant that can be revealed by ordinary enlargement and magnification of the photographs. These techniques are available to the public, and the Fourth Amendment does not prohibit the government from using them as well. Moreover, petitioner offers no basis for determining when a particular level of detail has become constitutionally offensive other than the subjective desires of the complaining party.

Even if there were a subjective expectation of privacy in an outdoor facility, it would not be one that society recognizes as reasonable. Outdoor areas ordinarily "do not provide the setting for those intimate activities that the [Fourth] Amendment is intended to shelter from government interference or surveillance." *Oliver* v. *United States*, No. 82-15 (Apr. 17, 1984), slip op. 7. Whatever minimal privacy interest one could imagine as being infringed by the possibility of aerial observation of outdoor activity cannot outweigh the important public interests served by the use of that technique to assist government regulation and law enforcement. This is particularly so when the area in question is an industrial facility, rather than the curtilage of a home.

Even if, as petitioner contends, the configuration of pipes or other details of its outdoor plant may constitute a "trade secret," that fact would have no bearing on the Fourth Amendment question at issue here. Trade secret laws are designed to protect against unfair competition by preventing the unauthorized *disclosure or use* of a trade secret. These laws do not purport to establish any privacy interest that would be infringed by observation, and they provide no guidance for the constitutional inquiry. For example, even if aerial photographs were regarded as an improper means of obtaining a trade secret for purposes of unfair competition law, as disclosure of confidential information by a former employee would be, that would not mean that the method violates the Fourth Amendment. Moreover, the government has no interest in building a chemical plant to compete with petitioner or otherwise using the trade secret; therefore, its mere possession of particular information would not even violate the trade secret laws and ought to cause petitioner no concern. Indeed, nu-

merous statutes contemplate that companies will turn over their trade secrets to the government in the course of normal business.

II.

It is clear that the overflight here was not invalid for lack of statutory authority. When Congress invests a government agency with law enforcement and investigatory authority, it is naturally and properly assumed that the agency is entitled to use any methods of investigation that could lawfully be employed by private investigators, even if not specifically enumerated in the statute. Nothing in the Clean Air Act gives any reason to doubt the correctness of this assumption. Plainly, the expansion of EPA's powers to authorize it to enter and inspect private premises in conducting its inquiries carries no negative implication prohibiting other, less intrusive forms of investigation.

ARGUMENT

I. USING STANDARD, GENERALLY AVAILABLE PHOTOGRAPHIC EQUIPMENT TO TAKE AERIAL PHOTOGRAPHS OF AN OUTDOOR MANUFACTURING PLANT FROM NAVIGABLE AIRSPACE DOES NOT VIOLATE THE FOURTH AMENDMENT

Petitioner contends that the EPA violated the Fourth Amendment when it engaged a private concern to take aerial photographs of its outdoor chemical plant. Petitioner appears to advance several alternative, albeit related, contentions. First, because it has taken steps to exclude the public from entry onto the plant grounds, petitioner asserts that the plant is not an "open field" and hence that it is protected from observation by agents of the government in the absence of probable cause and a warrant (Br. 19-24). In any event, petitioner contends that the

aerial observation that took place here violated the Fourth Amendment. Petitioner appears to contend that it is unlawful to view its facility from the air because it has taken extensive measures to prevent observation from the ground (see *id.* at 7-9, 16-17, 21), and it particularly objects to the use of aerial photography, arguing that the Fourth Amendment prohibits anything other than unaided "naked eye" viewing (*id.* at 24-30). Finally, petitioner contends that the capacity of the photographs to reveal detail through enlargement and magnification demonstrates a Fourth Amendment violation (*id.* at 31-41).

The court of appeals correctly rejected these contentions. Even if one accepts petitioner's argument that the plant is not like an "open field" insofar as the public is denied access, this does not mean that the plant may not be viewed by the public (or the government) from a vantage point to which it undisputedly does have access. Put another way, the fact that an area is protected from physical entry does not mean that the law provides an additional barrier to observation from outside the property where none exists in fact. And the Fourth Amendment does not prevent the use of a camera to record an otherwise lawful visual observation.

A. The Fourth Amendment Does Not Generally Prohibit Government Officials From Observing Areas Exposed To Their View From A Place Where They Have A Right To Be

1. *There Is No Constitutional Bar To Viewing The "Curtilage" From A Vantage Point To Which The Public Has Access*

In *Oliver* v. *United States*, No. 82-15 (Apr. 17, 1984), the Court reaffirmed the "open fields" doctrine, which was first recognized in *Hester* v. *United States*, 265 U.S. 57 (1924). The Court held that the Fourth

Amendment is not violated by a government entry onto open fields even though the entry is an uninvited trespassory intrusion onto private property. The Court first noted (*Oliver*, slip op. 4-5) that open fields beyond the curtilage of a dwelling are not properly classified among the "persons, houses, papers, and effects" to which the protections of the Fourth Amendment apply. It then explained that the same result would also be independently reached under the "expectation of privacy" analysis of *Katz* v. *United States*, 389 U.S. 347 (1967). First, "open fields do not provide the setting for those intimate activities that the [Fourth] Amendment is intended to shelter from government interference or surveillance" (*Oliver*, slip op. 7). In addition, despite his ownership interest and manifestations of that interest such as fences or no trespassing signs, a landowner has no reasonable expectation of privacy in his open fields because "as a practical matter these lands usually are accessible to the public and the police in ways that a home, office or commercial structure would not be" (*ibid.*). The "open fields" doctrine thus is an illustration of the more general principle that "there is no reason [why a policeman or other government official] should be precluded from observing as an officer what would be entirely visible to him as a private citizen." *Texas* v. *Brown*, 460 U.S. 730, 740 (1983) (plurality opinion). See also *Maryland* v. *Macon*, No. 84-778 (June 17, 1985), slip op. 5; *Marshall* v. *Barlow's, Inc.*, 436 U.S. 307, 315 (1978); *Air Pollution Variance Board* v. *Western Alfalfa Corp.*, 416 U.S. 861, 865 (1974).

In *Oliver*, the Court distinguished "open fields" from the common law concept of "curtilage," described as "the land immediately surrounding and associated with the home" (*id.* at 8). While the Court expressly did not consider the scope of Fourth

Amendment protection of the curtilage as opposed to the home (*id.* at 9 n.11), it suggested that areas considered part of the curtilage would have greater constitutional protection than open fields. Petitioner seizes upon this distinction to support its challenge to EPA's aerial viewing of its outdoor plant. Petitioner contends that the outdoor portions of its plant are not "open fields," but rather are a "business curtilage" (Br. 20) that cannot constitutionally be viewed from the air. This contention misperceives the nature of the issue in *Oliver* and of the Fourth Amendment protection of privacy in the curtilage.[3]

It was never disputed in *Oliver* that the police were entitled to look into the landowner's property and see whatever they could see while standing on public

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[3] Petitioner's manufacturing plant does not fit within the ordinary understanding of the term "curtilage," which is particularly associated with the home. In *Oliver*, the Court described the curtilage as "the area to which extends the intimate activity associated with the 'sanctity of a man's home and the privacies of life.'" Slip op. 8 (quoting *Boyd* v. *United States*, 116 U.S. 616, 630 (1886)). The intimate activities associated with the home do not take place in the outdoor areas of a manufacturing plant. More generally, "the expectation of privacy that the owner of commercial property enjoys in such property differs significantly from the sanctity accorded an individual's home." *Donovan* v. *Dewey*, 452 U.S. 594, 598-599 (1981). Hence, petitioner's plant cannot be considered as coming within the ambit of the common law concept of "curtilage." See, *e.g.*, *United States* v. *Long*, 674 F.2d 848, 853 (11th Cir. 1982); *United States* v. *Wolfe*, 375 F. Supp. 949, 957-959 (E.D. Pa. 1974); but cf. *United States* v. *Swart*, 679 F.2d 698 (7th Cir. 1982) (stating that yard of auto repair shop may be "curtilage" and hence protected from unconsented entry). For present purposes, however, we will assume that the grounds of petitioner's plant are entitled to a degree of Fourth Amendment protection somewhat akin to, although not necessarily identical to, that appropriate for the curtilage. See pages 36-37, *infra*.

property. The focus of the litigation in *Oliver* was over the right of police to *enter* the property; regardless of the outcome of the case there would have been no bar to observation of the private property from outside, whether from the ground or the air (see slip op. 7 n.9). The same assumptions that underlay the Court's deliberations in *Oliver* apply to the curtilage. The fact that the Fourth Amendment may protect against entry in the absence of probable cause or a warrant does not mean that the Constitution erects a barrier to visual observation from areas open to the public. See, *e.g.*, *Texas* v. *Brown*, *supra* (looking into an automobile); *United States* v. *Santana*, 427 U.S. 38 (1976) (observing individual in doorway of her home); *United States* v. *Lee*, 274 U.S. 559 (1927) (looking onto a boat deck). This conclusion is particularly apt in the case of the common law concept of curtilage, which originated in the course of defining what intrusions into the area of the home would constitute a burglary (see 4 W. Blackstone, *Commentaries on the Laws of England* ch. 16, at 225 (Univ. of Chicago Press ed. 1979)); the notion of curtilage focuses on physical entry, not freedom from observation. Thus, petitioner's assertion here that its plant is not an "open field," but rather something akin to curtilage that is entitled to Fourth Amendment protection, does not address the question presented of the lawfulness of the *observation* of the plant from public navigable airspace.

This Court has never suggested that the Fourth Amendment prohibits government officials from observing the curtilage; indeed, a long line of decisions plainly demonstrates that the Court has aways assumed that such observation is lawful. In *Hester*, for example, the police officers who entered the open field were able to observe the defendant in possession of contraband just outside the doorstep of his house.

265 U.S. at 58. Once the Court determined that the trespass did not violate the Fourth Amendment, it did not doubt that the officers lawfully could observe the defendant's activities from their vantage point in the open field, although those activities almost surely took place within the curtilage. Similarly, in *United States* v. *Karo*, No. 83-850 (July 3, 1984), and *United States* v. *Knotts*, 460 U.S. 276 (1983), the Court considered the Fourth Amendment implications of police monitoring of a "beeper" transmitting signals from in or near a privately owned building. The Court found manifestly unobjectionable the use of a beeper to obtain information available from visual surveillance, even if that surveillance extended up to the door of a residence (see *Karo*, slip op. 7-9; 460 U.S. at 281-282, 285). The only Fourth Amendment problem arose from the use of the beeper "to obtain information that it could not have obtained by observation from outside the curtilage of the house" (*Karo*, slip op. 9). In sum, the fact that government officials may lack authority in a given situation to enter the curtilage of a residence does not prevent them from standing outside the curtilage and looking inside to observe what is exposed to their view from that vantage point. See also *Fullbright* v. *United States*, 392 F.2d 432, 434-435 (10th Cir.), cert. denied, 393 U.S. 830 (1968).

2. The Fact That The Purpose Of A Police Observation Is To Discover Evidence Does Not Automatically Make The Police Conduct A "Search" Within the Meaning Of The Fourth Amendment

Contrary to petitioner's contention (Br. 27-30), the fact that government officials are looking for something, and hence can be colloquially described as conducting a "search," does not mean that their activity is violative of the Fourth Amendment if done

in the absence of probable cause and a warrant. In Fourth Amendment terms, "[a] 'search' occurs 'when an expectation of privacy that society is prepared to consider reasonable is infringed.'" *United States* v. *Karo*, slip op. 6 (quoting *United States* v. *Jacobsen*, No. 82-1167 (Apr. 2, 1984), slip op. 3). This is because in those situations where there is no intrusion into a legitimate expectation of privacy, the investigative activity is presumptively reasonable even in the absence of any suspicion at all, and hence the Fourth Amendment's protection against "unreasonable" searches does not even come into play.

Obviously, when police scour the streets looking for a suspect or wait by the side of the highway looking for a particular car, they are conducting a "search," but their activity raises no Fourth Amendment question. Similarly, the Court has held that police may enter and inspect an open field (*Oliver*), have a dog sniff luggage (*United States* v. *Place*, 462 U.S. 696, 706-707 (1983)), and field test for cocaine (*United States* v. *Jacobsen*, *supra*) without any particularized suspicion of criminal activity. These measures do not implicate sufficiently weighty privacy interests to be deemed unreasonable in the absence of such suspicion (see *Oliver*, slip op. 5); hence, use of these measures does not invoke Fourth Amendment scrutiny of the justification for the search. For this reason, such measures are not "searches" within the meaning of the Fourth Amendment, although they plainly involve "searches" in the ordinary sense of looking for something. See *Oliver*, slip op. 11; *Place*, 462 U.S. at 707; *Jacobsen*, slip op. 10, 12. By the same token, the fact that government officials who peer into exposed curtilage may be "searching" for something does not mean that they are conducting a "search" within the meaning of the Fourth Amendment—*i.e.*, that their

activity is unreasonable in the absence of a particular degree of suspicion.[4]

B. Observation And Ordinary Photography From The Air Do Not Violate The Fourth Amendment

Petitioner's primary contention is that, even if ground level observation of activities and structures on the curtilage from a point outside the curtilage would be permitted, the use of airplanes, and particularly aerial photography, to observe its chemical plant is unconstitutional. Petitioner's assertion that these methods of observation invade its legitimate expectation of privacy must be assessed by reference to the two-part inquiry first set forth by Justice Harlan in his concurring opinion in *Katz* v. *United States*, 389 U.S. at 361 (1967), and subsequently embraced by the full Court. See, *e.g.*, *United States* v. *Knotts*, 460 U.S. at 280-281; *Smith* v. *Maryland*, 442 U.S. 735 (1979). Under this test, an individual has a legitimate expectation of privacy subject to constitutional protection in a particular area or activity if he has exhibited a subjective expectation of privacy and if that expectation is one that society is prepared to recognize as reasonable.

The first part of the test recognizes that there are situations in which even essentially private activities that ordinarily warrant Fourth Amendment protection nonetheless can be devoid of any legitimate expectation of privacy because an individual engages in those activities in a manner that is not calculated to shield them from the public. If these otherwise

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[4] Suppose that in this case EPA agents had observed and photographed petitioner's plant from the top of a nearby tall building or water tower. Plainly, there could be no tenable claim of a Fourth Amendment violation in such circumstances. For reasons explained in the next point, the same action from the public airspace is analytically indistinguishable.

private matters are exposed to the public, then they are equally exposed to government officials. Thus, an individual lacks a legitimate expectation of privacy in a private conversation that is loud enough to be overheard by passersby (*Katz*, 389 U.S. at 361 (Harlan, J., concurring)), in private papers that he leaves exposed on a park bench, or in reading material that he sells to the public (*Maryland* v. *Macon*, *supra*). The second part of the test recognizes that the mere fact that an individual has taken steps to protect certain activities from observation by the public does not automatically mean that they are protected by the Fourth Amendment. Some activities and areas are sufficiently removed from the intimate private activities whose protection is at the core of the Fourth Amendment that the government's interest in effectively conducting its business outweighs the limited privacy interest involved. For example, even if a landowner takes steps to exclude the public from his marijuana fields, the Fourth Amendment does not prevent police from entering to investigate the illegal enterprise (*Oliver*, slip op. 13).[5]

1. *There Is No Legitimate Expectation That One Can Conduct Outdoor Activity Free From The Possibility Of Aerial Observation*

In today's society, there can be no reasonable subjective expectation that outdoor activity will be free from overflights by aircraft and the possibility of observation from such aircraft. Since 1926, there has been a public right of travel in airspace above pre-

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[5] In this connection, we urge the Court to examine the photographs taken for EPA and contained in the Sealed Joint Appendix (Nos. 1, 2, and 3); the suggestion that they reveal the kind of private object or activity deserving of substantial Fourth Amendment protection seems to us to be entirely belied by the photographs.

scribed minimum altitudes of flight. See Air Commerce Act of 1926, ch. 344, § 10, 44 Stat. 574.[6] By regulation, the minimum altitude for fixed wing aircraft has been set at 1,000 feet in congested areas and 500 feet in uncongested areas. 14 C.F.R. 91.79.[7] In addition to commercial air carriers, this public highway through the air is used by more than 260,000 aircraft registered in the United States, which log more than 36 million flight hours per year. FAA, U.S. Dep't of Transportation, *No. AMS-420, Census of U.S. Civil Aircraft* 4, 46, 54 (Dec. 31, 1983). Airplanes and helicopters flying at relatively low altitudes are used routinely to perform such diverse functions as providing traffic reports, crop dusting, shooting film for news programs, sightseeing, and getting from one place to another. There is nothing to prevent the 718,000 active pilots (*id.* at 46) or their passengers on these planes from looking down and observing what they can see on the ground below from altitudes as low as 1,000 feet.[8]

Indeed, the litigation in *Oliver* was premised on the assumption by the parties and the Court that "the

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[6] This declaration of a public right of freedom of transit through navigable airspace was repeated in the Civil Aeronautics Act of 1938, ch. 601, § 3, 52 Stat. 980, and in the Federal Aviation Administration Act of 1958, Pub. L. No. 85-726, § 104, 72 Stat. 740. It is codified at 49 U.S.C. App. 1304.

[7] No minimum altitude is set for aircraft operating over open water or sparsely populated areas, but such aircraft must remain 500 feet above any person, vehicle, or structure. Helicopters may be operated at lower altitudes than those specified for fixed wing aircraft as long as they are operated without hazard to persons or property on the ground. 14 C.F.R. 91.79.

[8] More than 1 million flight hours per year are devoted to the purpose of "aerial observation." *Census of U.S. Civil Aircraft, supra,* at 54.

public and police lawfully may survey lands from the air." Slip op. 7 (footnote omitted). The Court relied on the fact that repudiation of the "open fields" doctrine would have little practical effect because law enforcement officials could resort to aerial surveillance (*id.* at 7 n.9). Even the dissenting opinion in the en banc court of appeals in *Oliver* shared this premise, although it disagreed with this Court's ultimate conclusion that an *entry* into open fields was permitted: "Oliver did not have a reasonable expectation of privacy from planes or helicopters flying overhead. Thus, the officers could have lawfully used airplanes or helicopters to observe the marijuana from the air." 686 F.2d at 372 (Keith, J., dissenting).[9]

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[9] In light of the established, pervasive use of the aerial highways, lower courts faced with the question have almost uniformly held that aerial observation does not violate the Fourth Amendment. See, *e.g.*, *United States* v. *Marbury*, 732 F.2d 390, 398 (5th Cir. 1984); *United States* v. *Allen*, 675 F.2d 1373, 1380-1381 (9th Cir. 1980), cert. denied, 454 U.S. 833 (1981); *United States* v. *Bassford*, 601 F. Supp. 1324, 1328-1332 (D. Me. 1985); *United States* v. *Mullinex*, 508 F. Supp. 512, 514-515 (E.D. Ky. 1980); *United States* v. *DeBacker*, 493 F. Supp. 1078, 1081 (W.D. Mich. 1980); *State* v. *Knight*, 63 Hawaii 90, 621 P.2d 370 (1980); *People* v. *Lashmett*, 71 Ill. App. 3d 429, 431, 389 N.E.2d 888, 890 (1979), cert. denied, 444 U.S. 1081 (1980); *Williams* v. *State*, 157 Ga. App. 476, cert. denied, 454 U.S. 823 (1981). The courts that have found constitutional violations in the context of aerial observation generally have done so in cases where the overflights went below navigable airspace,. See, *e.g.*, *National Organization for the Reform of Marijuana Laws, Inc.* v. *Mullen*, 608 F. Supp. 945 (C.D. Cal. 1985); *People* v. *Sneed*, 32 Cal. App. 3d 535, 542-543, 108 Cal. Rptr. 146, 150-151 (1973).

In *People* v. *Ciraolo*, 161 Cal. App. 3d 1081, 208 Cal. Rptr. 93 (1984), cert. granted, No. 84-1513 (June 3, 1985), the California Court of Appeals appears to have established a broad rule that aerial observation of the curtilage violates

Establishment of a rule making it a Fourth Amendment violation to look down into the curtilage from a passing airplane would lead to strange results. Government officials would be forced to avert their eyes from the ground during flight even as other members of the public looked down. Moreover, because aircraft may come upon structures suddenly and, in any event, it is difficult to distinguish between the curtilage and open fields, the practical effect of such a rule would be to prevent government officials from observing even open fields from the air—an action that everyone agrees is lawful. See *United States* v. *Bassford*, 601 F. Supp. 1324, 1331-1332 (D. Me. 1985). Indeed, petitioner itself at times appears to concede that aerial observation with the naked eye does not implicate the Fourth Amendment (see Br. 25, 37). In short, Congress's establishment of a public right to freedom of transit in navigable airspace necessarily constitutes a decision in favor of the social and economic advantages of relatively unrestrained aviation at the expense of the loss of some degree of privacy from airborne observation. That privacy has been lost to the public, and it cannot be recaptured by reading the Fourth Amendment to impose special limitations upon the viewing ability of government officials.

2. *There Is No Reasonable Expectation That An Outdoor Facility Will Not Be Photographed From The Air*

Petitioner correctly notes that aerial photography allows more to be seen than mere observation from the air by the unaided human eye. The creation of

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the Fourth Amendment in the absence of probable cause and a warrant. For the reasons discussed in this brief, we believe that *Ciraolo* is wrongly decided and should be reversed by this Court.

a permanent record may make it easier for the observer to comprehend fully what is exposed to his view. Moreover, it is usually possible to enlarge a photograph, thus exposing more detail than could be seen with the naked eye from the same vantage point.[10] It does not follow, however, that an individual has a legitimate expectation that his outdoor activity or facility will be free from the possibility of being photographed from a plane flying overhead.

As this Court's own decisions reflect (see *Nebraska* v. *Wyoming*, 325 U.S. 589, 668 (1945); *Kansas* v. *Missouri*, 322 U.S. 213, 220 (1944)), aerial photography has been practiced on a regular basis since the early days of aviation. See generally Wick, *Aerial Photography of Real Property and Its Admissibility into Evidence*, 1 Northrup U.L.J. 113 (1979). Aerial photography is frequently employed by both governments and private persons for a variety of useful purposes.[11] In contrast to wiretapping (see *Berger* v.

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[10] Petitioner also asserts (Br. 38) that a camera can see what a person cannot because looking through the floor of a plane is a superior vantage point to looking out the window. It may be true that a passenger's view from a commercial air carrier is not very good as compared to a floor-mounted camera. But a passenger in a smaller general aviation craft, which is the sort of aircraft that is likely to fly low enough that items on the ground may be visible, has a much greater range of vision and ordinarily would be able to have a downward view similar to that of a camera.

[11] Aerial photographs are used extensively for mapping purposes, and they have considerable utility in urban and regional planning (see, *e.g.*, Reynolds, *Oblique Aerial Photography for Comprehensive Urban Planning*, Plan. Advisory Service Rep., May 1981, at 1; W. MacConnell & M. Cobb, Mass. Agricultural Experiment Station, *Bull. No. 622, Remote Sensing 20 Years of Change in Middlesex County Massachusetts, 1951-1971* (1974)) and highway location and design (see Highway Design Division, Texas Highway De-

New York, 388 U.S. 41, 45-49 (1967)), there is no history of federal or state laws generally restricting aerial photography. Congress has acted to prohibit the use of such photography only in very limited circumstances (see 18 U.S.C. 796 (military installations); 42 U.S.C. 2278(b) (designated national security-related nuclear facilities)) and otherwise has allowed its widespread use. Indeed, the common use of this technique is evidenced in this case by the fact that the EPA did not need to go to great lengths to obtain the photographs. It simply hired a local contractor whose business was aerial photography.

The record in this case shows that the government routinely engages in aerial photography for diverse purposes having nothing at all to do with investigating criminal activity or discovering regulatory violations. See, *e.g.*, Affidavit of G. LaRoche, Nuclear Regulatory Commission (site evaluation and emergency response planning for nuclear power plants); Affidavit of J. Jarman, United States Forest Service (watershed, flood plain, and resource survey); Affidavit of R. McArdle, Department of Agriculture (wetlands and soil conservation). See also *United States* v. *Tull*, No. 84-1766 (4th Cir. July 30, 1985), slip op. 14 n.5. The same is true of state governments. Indeed, the record shows that petitioner's Midland plant was photographed from the air by the Michigan Department of Natural Resources pursuant to its regular regulatory functions (J.A. A54). Thus, petitioner's outdoor plant is exposed to observation and photography from the air, and such photography is known to be relatively common. In these circumstances, it cannot reasonably be asserted that peti-

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partment, *The Use of Maps Compiled by Photogrammatic Methods* (1966)). See generally Wick, *supra*, 1 Northrop U.L.J. at 116-117.

tioner had any genuine subjective expectation of privacy from aerial photography.

Notwithstanding the fact that it could not reasonably entertain a subjective expectation of privacy from aerial photography, petitioner argues (Br. 16, 25, 30, 31, 37-39) that the use of technology such as a camera to enhance the vision of the naked eye is so inherently intrusive that it must be deemed violative of the Fourth Amendment. This broad proposition is clearly without support in established Fourth Amendment jurisprudence. In *United States* v. *Knotts*, 460 U.S. at 282, the Court observed that "[n]othing in the Fourth Amendment prohibited the police from augmenting the sensory faculties bestowed upon them at birth with such enhancement as science and technology afforded them in this case" (a beeper). While this statement does not mean that there are no constitutional limits on the use of technological developments to aid the police, it reflects the Court's consistent recognition that the Fourth Amendment does not restrict government investigators to observation by the unaided human senses.[12] A long line of authority has recognized the use of relatively common devices to enhance vision, hearing, smell, and memory.

The Court has not specifically confronted the question whether photography of an area that a government official may lawfully view with the naked eye

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[12] If, for example, the government possessed a sophisticated X-ray device that enabled it to see through the walls of a house, there seems little doubt that the use of such a device to discover objects or activities located inside a dwelling would be subject to Fourth Amendment regulation. That is because people can reasonably expect privacy from such surveillance. The same plainly cannot be said with respect to the use of commonly available photographic equipment to record outdoor activities or conditions.

violates the Fourth Amendment, but its decisions on related questions leave little doubt that it does not. In *United States* v. *Lee*, *supra*, the Court ruled that there was no constitutional bar to the use of a searchlight to illuminate a dark area into which officers could not otherwise see. The Court analogized the use of the searchlight to the use of binoculars, which it regarded as so plainly constitutional that it did not warrant discussion. 274 U.S. at 563. See also *On Lee* v. *United States*, 343 U.S. 747, 754 (1952). The mere fact that human vision is enhanced in a way that allows an observer to see more detail does not create a constitutional violation. By the same token, the mere fact that the camera creates a permanent record of a view that is only transitory to the naked eye does not prohibit its use. In *Lopez* v. *United States*, 373 U.S. 427, 439 (1963), the Court recognized that an undercover police officer may surreptitiously record a private conversation; indeed, he may even carry a transmitter to broadcast the conversation to other police officers. See *United States* v. *Caceres*, 440 U.S. 741, 750-751 (1979); *United States* v. *White*, 401 U.S. 745 (1971). As long as he is listening to the conversation lawfully, there is no bar to recording it for permanent use. Against this background, there is little basis for the contention that the police or other government officials are constitutionally prohibited from photographing what they can lawfully observe with the naked eye (or through eyeglasses). See also *United States* v. *Crews*, 445 U.S. 463, 474-475 (1980) (plurality opinion).

The courts of appeals have recognized that government officials are entitled to take photographs or make other permanent records of things that they lawfully observe. In *United States* v. *Allen*, 675 F.2d 1373, 1379-1381 (9th Cir. 1980), cert. denied, 454 U.S. 833

(1981), the court upheld the admissibility of photographs taken from a helicopter with a telephoto lens. See also *United States* v. *Hensel*, 509 F. Supp. 1376, 1379 (D. Me. 1981), aff'd, 699 F.2d 18, 41 (1st Cir.), cert. denied, 461 U.S. 958 (1983) (aerial photographs); *United States* v. *Espinoza*, 641 F.2d 153, 167 (4th Cir. 1981) (photographs on ground); *United States* v. *Thomas*, 613 F.2d 787, 793 (10th Cir. 1980) (photocopies). And the courts have repeatedly upheld the use of vision enlarging aids such as binoculars. See, *e.g.*, *United States* v. *Hensel*, 699 F.2d at 41; *United States* v. *Dubrofsky*, 581 F.2d 208, 211 (9th Cir. 1978); *United States* v. *Minton*, 488 F.2d 37, 38 (4th Cir. 1973), cert. denied, 416 U.S. 936 (1974); *Fullbright* v. *United States*, *supra*.[13]

3. *The Fact That Good Quality Aerial Photographs Are Capable Of Revealing Additional Detail When Enlarged And Magnified Does Not Give Rise To A Fourth Amendment Violation*

Perhaps recognizing the difficulty in contending that it has a legitimate expectation of privacy from

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[13] Petitioner relies heavily (see Br. 16, 25, 27-29, 37) on *United States* v. *Taborda*, 635 F.2d 131 (2d Cir. 1980), and *United States* v. *Kim*, 415 F. Supp. 1252 (D. Hawaii 1976), which found the use of telescopes to violate the Fourth Amendment. These cases, however, are plainly inapposite here because they turned on the fact that the telescopes were used to see inside the home, not to observe activity occurring in the open air. *Taborda*, 635 F.2d at 138-139; *Kim*, 415 F. Supp. at 1257-1258. Whether or not these cases are correctly decided on their facts, it is apparent that the fundamental Fourth Amendment concern with the privacy of the home because of the intimate activities that occur there justifies greater protection against the use of technological visual aids than is appropriate in the case of outdoor activities, even if they occur on the curtilage. See *United States* v. *Hensel*, 699 F.2d at 41; *United States* v. *Lace*, 669 F.2d 46, 49-51 (2d Cir.), cert. denied, 459 U.S. 854 (1982). See generally pages 33-37, *infra*.

aerial photography generally, petitioner devotes part of its brief (at 35-41) to what appears to be an extremely case-specific contention, namely, that the particular photographs taken here—because of the degree of detail of petitioner's chemical plant capable of being revealed by enlargements of those photographs viewed under magnification—were so intrusive that they should be held to violate the Fourth Amendment. This position is somewhat unfocused, but it appears to suggest an unacceptable regime in which the dispositive factor would be the degree to which an individual subjectively desires to be free from aerial observation—a standard that would make it all but impossible for government officials to have known in advance whether their conduct comports with the Fourth Amendment. Before turning to this contention, however, it is important to emphasize that this case does not genuinely present the case-specific question addressed by petitioner; the intrusion that petitioner asserts would be unconstitutional is a hypothetical one that was not actually established by any actions taken by the government in this case.

a. The Fourth Amendment issue in this case comes to the Court in a most peculiar context. There has been no attempt by the government to introduce any evidence gleaned from the overflight against petitioner in any judicial or other proceeding, and thus there is no specific evidence that is sought to be suppressed. Rather, it is petitioner that commenced this litigation, seeking to enjoin the government from *any* use of the information obtained from the aerial photography. Petitioner's arguments accordingly have been addressed to the entire array of photographs taken and what they theoretically are capable of revealing through the further application of enlargement and magnification technology. The particular level of detail about which petitioner expresses principal con-

cern in this Court (see Br. 12, 37-39; Sealed Joint Appendix, Photographs 4 & 5) is found in enlargements created not by the government, but by petitioner itself; these enlargements have never been in the government's possession except in a theoretical sense.[14]

There is no reason to suppose that the government would ever have made enlargements like those made by petitioner, for they do not relate to any matter in which the government has expressed an interest. The government was investigating the two power plants at petitioner's Midland facility, and EPA officials did make modest 2x enlargements of some pictures of the power plants. Petitioner does not assert the existence of any private information in these pictures of the power plants. Rather, it focuses its attention on the

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[14] In our view, the district court erred in exercising jurisdiction over petitioner's suit, presumably on the basis of its inherent equitable powers, rather than waiting for a concrete controversy where the government actually tried to make use of some of the information gathered during the overflight. See *Pieper* v. *United States*, 604 F.2d 1131 (8th Cir. 1979); *In re Worksite Inspection of Quality Products, Inc.*, 592 F.2d 611, 613-617 (1st Cir. 1979); *Hunsucker* v. *Phinney*, 497 F.2d 29 (5th Cir. 1974), cert. denied, 420 U.S. 927 (1975). Moreover, even if there existed a sufficient prospect of future warrantless aerial photography of petitioner's facility to justify possible declaratory or prospective injunctive relief, it is most doubtful that the injunction barring any use of the photographs already taken could be proper. It is by no means clear that the exclusionary rule would apply to EPA regulatory proceedings (cf. *INS* v. *Lopez-Mendoza*, No. 83-491 (July 5, 1984)) or that, if it did, it would bar consideration of evidence obtained in the mistaken but "good faith" belief that the Fourth Amendment was not being violated (cf. *United States* v. *Leon*, No. 82-1771 (July 5, 1984)). The propriety of EPA's use of the photographs in such a manner would be best determined in connection with any proceeding in which such use was sought to be made.

details of the nearby chemical manufacturing facilities that were also captured on the film. Petitioner has enlarged these photographs 20x (see Sealed Joint Appendix, Photograph 5) and claims that the enlargements that it itself produced so intrude into its private concerns that the aerial photography must be held to violate the Fourth Amendment. In sum, the government has taken photographs that do not appear to implicate any privacy concerns of petitioner; petitioner in turn has manipulated those photographs to expose information that it desires to keep private and now complains about the attendant privacy intrusion.[15]

Petitioner's complaint therefore is about the *potential* privacy intrusion created by the aerial photography here. The Court has recently rejected essentially the same contention, however, making clear that the Fourth Amendment does not prohibit government activity simply because of the information that could be revealed if further activity were undertaken. The fact that it may violate the Fourth Amendment to monitor a beeper when it is located in a private residence (see *United States* v. *Karo*, *supra*) does not

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[15] The difference between the magnified enlargements upon which petitioner focuses its attention and the actual photographs possessed by the government is dramatic. Petitioner apparently regards enlargements that show items as small as ½ inch in diameter to be unconstitutionally intrusive (see Pet. Br. 12 n.*, 14). The original contact prints made by the government in this case of the photographs taken at the lowest altitude were at a scale of 1 inch = 200 feet (Pet. Br. 12). Thus, on these prints a half-inch item would measure 1/4800 of an inch. The district court found that these prints could be enlarged to a scale of 1 inch = 20 feet without significant loss of resolution (Pet. App. B3; see Pet. Br. 12; J.A. A59). Even at the scale of these potential enlargements, the items in question would measure only 1/480 of an inch on the photograph.

mean that it is unlawful to install the beeper in a container of chemicals that might be taken into a private residence. As long as the beeper is not actually used to reveal information about the whereabouts of an item in a private place that could not be learned through observation from a place where the police have a right to be, its use for other purposes not implicating protected privacy rights is lawful (see *United States* v. *Knotts*, 460 U.S. at 285). It is clear that "potential, as opposed to actual, invasions of privacy [do not] constitute searches for purposes of the Fourth Amendment. * * * It is the exploitation of technological advances that implicates the Fourth Amendment, not their mere existence." *Karo*, slip op. 6.[16]

Thus, even on the assumption that petitioner is correct that it would violate its Fourth Amendment rights for the government to observe the details of petitioner's chemical plant to the extent revealed in

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[16] Under petitioner's suggestion, as technology improved, there would paradoxically be a reduction in the degree of technology available to government officials. For example, under *Lopez* v. *United States*, *supra*, the police are permitted to record a conversation between a suspect and an informant. Suppose it were possible through the use of advanced technology to amplify that recording and suppress interference to the extent that a conversation taking place in the adjoining room could be made audible. Petitioner's contention would lead to the perverse result that the possibility of such enhancement would invalidate the act of recording itself and require that *Lopez* be overruled. Indeed, petitioner's argument, if carried to its logical limit, could have ramifications even outside the context of technological enhancement. It would suggest that an otherwise lawful seizure of an item could violate the Fourth Amendment because it creates the potential for an unlawful search or viewing of the item. Compare *Walter* v. *United States*, 447 U.S. 649 (1980); *United States* v. *Chadwick*, 433 U.S. 1, 13-14 n.8 (1977).

the enlargements made by petitioner, the aerial photography here would not be unconstitutional. Petitioner's remedy in such a case would be to challenge the government's use of any unlawful enlargements that it might make; there is no basis whatsoever for the relief that petitioner obtained in this case—an injunction against government use of any of the photographs, including the unenlarged photos of the exterior of the power plants that apparently are not even alleged to intrude into any privacy interest.

b. In any event, it would not violate the Fourth Amendment even if the government had sought to enlarge and use the particular photographs of the chemical plant of which petitioner complains. Petitioner advances no discernible basis for determining when aerial photography is too intrusive to meet constitutional standards. Petitioner concedes that the Michigan Department of Natural Resources has taken aerial photographs of its plant from an altitude of 12,000 feet (one of the altitudes at which the EPA photographs in this case were taken) (see Br. 38; J.A. A45-A47), but it dismisses these photographs with the statement that the degree of detail that such photographs show "does not cause Dow concern" (Pet. Br. 39).[17] The lawfulness of a particular method of investigation cannot turn solely on whether it causes the subject concern; the Fourth Amendment requires a more objective standard. Petitioner's focus on its own subjective desire is particularly inapt here,

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[17] In light of this concession, it is unclear how petitioner could have sought, and obtained from the district court, an injunction prohibiting EPA from using any of the photographs taken by Abrams Aerial Survey. Some of these photographs were taken at 12,000 feet (see J.A. A39, A45) and thus approximate the photographs taken by the Michigan state agency.

where the gist of its complaint is directed not at the actual observations or photographs made, but at the detail they potentially can reveal when enlarged and magnified. Presumably then, under petitioner's theory, if enlargement and magnification technology were to improve, the heretofore unobjectionable photographs taken by the State of Michigan might suddenly turn into Fourth Amendment violations.[18]

In our view, the question whether an individual or corporation has a legitimate expectation of privacy from a particular form of aerial observation depends largely on the extent to which that form of observation is available to the public. If the technology to take a particular type of aerial photograph is commonly available and society has taken no steps to restrict or outlaw such photography, then an individual can have no reasonable expectation that his outdoor activity will not be photographed in this fashion by members of the public. If so, the Fourth Amendment does not prevent the government from taking the same photographs.

Unless all aerial photography is to be banned, there is no basis for finding a Fourth Amendment violation in the pictures taken on behalf of EPA. The photographs were taken with ordinary, commercially available, camera equipment.[19] No technology

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[18] Even with the technology commonly available today, the altitude at which a plane flies is only one factor that determines the detail potentially exposed to the photographer. That level of detail will also depend on the type of camera and the degree of enlargement. For example, the photographs taken by the state officials, if enlarged 10x, would be on the same scale as the EPA pictures taken from the lowest altitude here—pictures that the district court enjoined the government from using.

[19] Indeed, the record indicates that photographs showing greater detail than those taken here could have been taken

was used that is secret or within the special competence of the government; on the contrary, the government hired a private contractor who could have been hired by any member of the public, and the contractor used his standard equipment.[20] When the aircraft flew over the plant, it was well within the navigable airspace where Congress has guaranteed its right to fly. Any details of the outdoor portions of the plant capable of being revealed by this photography (and we reiterate that the government did not take the steps hypothesized by petitioner that could reveal such details) cannot reasonably have been expected to remain private. If such photography is available to members of the public, such as news magazines interested in petitioner's plant (see *Fish Stories and Empty Offices*, Time, Apr. 11, 1983, at 18), the Fourth Amendment surely does not prohibit the government from using such photography in the exercise of its regulatory responsibilities.

4. *Society Does Not Recognize A Reasonable Expectation Of Privacy In Outdoor Activity Strong Enough To Outweigh The Government Interest In Using Aerial Photography*

As detailed above, application of the first prong of the *Katz* test shows that no Fourth Amendment violation occurred here because petitioner could not have a reasonable subjective expectation of privacy from

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from a helicopter with a good quality 35 millimeter camera and a standard 70 millimeter lens (J.A. A48-A50).

[20] An urban planner discussing the utility of aerial photography reports that his local planning department purchased from Abrams Aerial Survey Corporation vertical aerial photographs of the entire West Bloomfield Township area in Michigan. The county planning commission made available photographs of the populated area at an original scale of 1 inch = 100 feet, *i.e.*, twice as detailed as the most detailed pictures taken for EPA in this case. See Reynolds, *supra*, Plan. Advisory Service Rep. at 4-5.

common, commercially available, and generally lawful photography. The second prong of the *Katz* test, focusing on the nature of the privacy interest at stake, also supports the decision of the court of appeals. The only areas observable from the air, no matter how extensively photographs are enlarged or magnified, are ones that are open to the sky. Such outdoor areas ordinarily "do not provide the setting for those intimate activities that the [Fourth] Amendment is intended to shelter from government interference or surveillance." *Oliver*, slip op. 7.[21]

To be sure, it is possible that a person may sometimes engage in an essentially private activity in an outdoor setting. The question is whether it is reasonable from society's viewpoint for the Fourth Amendment to protect from the fairly unlikely possibility of aerial observation those occasional episodes of intimate activity that occur outdoors (which are, of course, undertaken with knowledge that they may be observable from the air). This inquiry into the reasonableness of aerial photography must be judged "by balancing its intrusion on the individual's Fourth Amendment interests against its promotion of legiti-

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[21] Despite petitioner's efforts to equate the two cases (see Br. 16, 25, 27), the difference in the nature of the activity sought to be protected makes this case fundamentally unlike *Katz*. In *Katz*, the question was the government's right to overhear "private communication" (389 U.S. at 352), the sort of activity that lies at the core of the privacy interests valued by our society. Therefore, the Court found that an individual who uses a phone booth "is surely entitled to assume that the words he utters into the mouthpiece will not be broadcast to the world" (*ibid.*). A fundamental aspect of privacy would be lost if people had no ability to keep their private conversations from being overheard at the whim of the government. No comparable loss of privacy occurs if persons are subject to the possibility of aerial observation when they are outdoors.

mate governmental interests." *Delaware* v. *Prouse*, 440 U.S. 648, 654 (1979) (footnote omitted). See also *United States* v. *Martinez-Fuerte*, 428 U.S. 543, 555 (1976); *Camara* v. *Municipal Court*, 387 U.S. 523, 536-537 (1967).

We submit that it is not reasonable to use the Fourth Amendment in the present context to erect a visual barrier where none exists in fact. There is a strong public interest in allowing the government to use efficient and effective means in discharging its law enforcement, regulatory, and other responsibilities. The extremely limited privacy interest in protecting from the possibility of aerial observation the ordinary gamut of nonprivate outdoor activities such as the emission of gases from a factory smokestack, and even the occasional outdoor activity for which an individual might genuinely desire privacy, cannot outweigh this government interest, particularly when private citizens are in any event able to observe such activity from the air without restriction. The "balancing of competing interests" that is the "key principle" in assessing reasonableness (see *Michigan* v. *Summers*, 452 U.S. 692, 700 n.12 (1981), quoting *Dunaway* v. *New York*, 442 U.S. 200, 219 (1979)) tips overwhelmingly in favor of permitting aerial observation and photography.

The lack of constitutional protection of outdoor activity from aerial observation does not mean that persons are unprotected by the Fourth Amendment when they are outdoors. Because of its association with the home, this is particularly true when outdoor activity takes place within the curtilage. There it is entitled to the basic privacy protection of freedom from entry and interference without just cause.[22]

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[22] This protection against entry serves the dual purpose of protecting property and activities located on the curtilage from

For many of the activities that might conceivably be conducted outdoors, yet considered private, this protection against entry fully satisfies any privacy interest that an individual might have. A prayer meeting, a moment of solitude, or a desire to protect fauna from human intervention (see *Oliver*, slip op. 9 (Marshall, J., dissenting)) is significantly disturbed by an uninvited entry, yet is hardly intruded upon, if at all, by mere observation from an overflying aircraft. Even the sort of outdoor activity that might be considered intruded upon by observation, such as a lovers' tryst, is obviously much more severely intruded upon by an actual entry. Thus, the decision below does not "wreak[ ] havoc on protection for the home and its attendant curtilage" (Pet. Br. 34). On the contrary, given the sorts of activities that are likely to take place in the curtilage, a failure to prohibit aerial photography permits only a fairly minimal intrusion into the privacy of those intimate activities that are at the core of the Fourth Amendment. See *Oliver*, slip op. 7.

For the reasons discussed above, we submit that aerial photography of the curtilage does not infringe an expectation of privacy that society would regard as reasonable. This case, however, does not even involve the curtilage, and therefore it is even clearer here that there is no basis for finding that the Fourth Amendment prohibits the overflight that occurred. The common law concept of curtilage is particularly associated with the home, and its special Fourth Amendment protection derives from the fact that the intimate activities associated with the home may extend in some fashion to the curtilage. See note 3, *supra*. That is plainly not the case with peti-

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interference and providing a buffer that enhances the privacy and security of the home itself.

tioner's outdoor manufacturing plant. The types of private activities that might occur in the curtilage, or even in open fields (see *Oliver*, slip op. 9 (Marshall, J. dissenting)), surely would never take place within the confines of petitioner's manufacturing plant. Indeed, if we put to one side for the moment the question of trade secrets, which we discuss next, it is difficult to conceive of any business-related activities likely to take place within the outdoor surroundings of a manufacturing plant that would fall within the scope of private activities that the Fourth Amendment is intended to shelter. Accordingly, there can be no justification for interpreting the Fourth Amendment to protect the plant from aerial observation at the expense of the considerable government interest in effective regulation.[23]

5. *The Existence Of A Trade Secret In An Outdoor Area Does Not Convert Photography Of That Area Into A Fourth Amendment Violation*

The overriding theme of petitioner's contention in this Court is that the photographs of the outdoor portions of its plant capture "trade secrets" that are contained in the precise configuration of pipes and equipment that fill the spaces between the enclosed structures. See Pet. Br. 22-24, 35-39, 45-47. Petitioner assets that its interest in preventing dissemination of these trade secrets confers upon it a consti-

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[23] Petitioner complains (Br. 6, 32-33; see also Pet. App. G1-G2) that it is economically infeasible for it to take measures to insulate its plant from aerial observation. It hardly follows from that premise, however, that the Constitution must pick up the slack and serve as a roof for the plant. A more reasonable deduction would be that the practical impossibility of protecting petitioner's outdoor activity from observation merely evidences the fact that the activity cannot reasonably be regarded as "private" and therefore is not the sort of activity at which the constitutional protection is directed.

tutional right to be free from aerial photography by the government. While petitioner's premise strikes us as doubtful, we will assume for present purposes that the configuration of pipes does constitute a trade secret that is capable of being revealed by the photographs taken by Abrams Aerial Survey.[24] The fact is, however, that the presence or absence of a trade secret is completely irrelevant to the general Fourth Amendment issue at hand.[25]

Both the common law and modern statutory law have recognized that society has an interest in giving individual entrepreneurs proprietary rights in the fruits of their labor and inventiveness. It is thought preferable for businessmen to develop products through innovation and hard work, rather than by stealing the work product of a competitor. Accordingly, some degree of protection of trade secrets has long been a component of tort or unfair competition

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[24] The existence of a trade secret in this case was in part at least an issue of fact that was disputed by the parties. For this reason, the district court did not dispose of petitioner's Fifth Amendment claim on summary judgment. See Pet. App. B38. The Fifth Amendment claim was later dismissed without prejudice, and therefore this factual dispute has not been resolved. In any event, we think it highly doubtful as a matter of law, that it is possible to have a trade secret that is so easily observable from the air. See note 29, *infra*.

[25] Moreover, we note that the significance of petitioner's trade secret claims to this particular litigation seems to be greatly overstated. EPA policy, reflected in published regulations (40 C.F.R. 2.119(b)), is to protect, not release, trade secret information. Rather than requesting that EPA preserve the confidentiality of this information, however, petitioner chose to institute this lawsuit. Furthermore, the relief sought and obtained by petitioner goes well beyond what is relevant to protecting its trade secret. It seems apparent, therefore, that petitioner wishes to prevent EPA overflights quite apart from any question of trade secrets.

law. Section 757(a) of the Restatement of Torts (1939) states that "[o]ne who discloses or uses another's trade secret, without a privilege to do so, is liable to the other if he discovered the secret by improper means." As petitioner notes, similar provisions are contained in Michigan law and in the Uniform Trade Secrets Act. See Br. 47-48; Pet. App. C1-C2, D1-D6, E1-E3.

What petitioner fails to appreciate is that these rules are directed solely at preventing unfair competition; they do not purport to establish any privacy interest and provide no guidance for the Fourth Amendment inquiry. The Restatement establishes tort liability for one who "discloses or uses" a trade secret. The Michigan statute makes it a misdemeanor for one to steal a trade secret "with an intent to appropriate a trade secret to his own use or to the use of another." Mich. Comp. Laws Ann. § 752.772 (West 1985); Pet. App. E3. The Uniform Trade Secrets Act §§ 1-3, 14 U.L.A. 541-548 (1980), establishes a right to injunctive relief or damages from misappropriation of a trade secret. "Misappropriation" is defined in terms of "disclosure and use" of a trade secret acquired through improper means. Pet. App. D1-D3.[26] Clearly, the essence of the law's pro-

[26] Section 1(2)(i) of the Act, 14 U.L.A. 541 (1980), arguably suggests that acquisition of a trade secret can alone constitute actionable misappropriation. The full context of the statute, however, makes clear that the statute contemplates either disclosure or use of the trade secret as the basis for a suit under the statute. The basic injunctive relief available is an injunction against future use and disclosure (see Section 2(b) and Commissioners' Comment, 14 U.L.A. 544 (1980)), and it is difficult to imagine what damages could be available (Section 3) without disclosure or use by a competitor. To the extent mere acquisition implicates the statute, it is acquisition with the intent to appropriate a trade secret, which can be guarded

tection of trade secrets is the prohibition on unfair destruction of the competitive advantage of the owner of the secret *by disclosing or using it.* See 4 Restatement of Torts § 757 comment at 17 (1939). This prohibition is consistent with the goal of the rules to prevent unfair competition.

Just as clearly, this case involves none of the considerations that underlie the protection for trade secrets. Putting aside the fact that the government never sought to acquire the trade secret because it was interested in the power plants, not extreme magnifications of the chemical plants also captured on the film, it cannot seriously be contended that there was any danger that the government would *use* the trade secret. The EPA is not in the business of building chemical plants; its business is to administer the anti-pollution laws and to regulate emissions from manufacturing facilities. Nor is it in the business of supplying information about chemical manufacturing plants to a company's competitors. Thus, even if EPA inadvertently came into possession of a trade secret in the course of its aerial photograpy of petitioner's plant, it would not have violated the trade secret statutes, which focus on disclosure or use, and its action should not have given petitioner cause for concern that its secret had been compromised.[27]

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against by a suit to enjoin disclosure or use of the secret—relief far narrower than that sought and obtained from the district court by petitioner.

[27] Petitioner's argument in this regard highlights again the inappropriateness of considering its privacy claim in the abstract, rather than in the specific context of a government attempt to use the information it has obtained. There appears to be no claim that petitioner has any trade secret in the power plants that were the target of the government's aerial observation. Thus, to the extent petitioner's Fourth Amendment claim

More generally, there is no reason why the Fourth Amendment ought to be implicated simply because the government comes into possession of trade secrets. That occurs all the time in the course of the normal functioning of government. Statutes require companies to furnish the government with information that may be classed as trade secrets (see, *e.g.*, Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. 136(a)), and the government may subpoena such information for legitimate purposes (see, *e.g.*, *Wearly* v. *FTC*, 616 F.2d 662 (3d Cir.), cert. denied, 449 U.S. 822 (1980)). Legal disputes arise over the government's power to *disseminate* such information, which implicates the companies' interest in preserving their trade secrets from competitors, but it has not heretofore been suggested that it is unlawful for the government itself to take possession of this information if it keeps it confidential. See, *e.g.*, *Ruckelshaus* v. *Monsanto Corp.*, No. 83-196 (June 26, 1984), slip op. 20 n.13; *Wearly* v. *FTC*, *supra*; see also *Chrysler Corp.* v. *Brown*, 441 U.S. 281, 306 (1979). Indeed, the practice of furnishing trade secrets to the government is so pervasive that special statutes have been enacted to protect against the possibility that they will be unjustifiably disclosed. See, *e.g.*, 18 U.S.C. 1905 (Trade Secrets Act); 5 U.S.C.

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rests on the presence of a trade secret, petitioner would appear to have no objection to the overflight if the camera had been more discriminating and the photographer had been able to limit his photographs to the target power plants. But that situation ought not to be treated differently from the one actually presented here, where the government allegedly has inadvertently obtained the capability to examine photographs of a trade secret but has no intention of actually doing so, much less making use of the trade secret. Under petitioner's theory, a marijuana farmer could protect his fields from aerial observation by placing some trade secret in the midst of the marijuana. Cf. *Oliver*, slip op. 11 n.13.

552(b)(4) (Freedom of Information Act). The Clean Air Act itself has a provision protecting trade secrets (42 U.S.C. 7414(c)), which indicates that Congress contemplated that EPA would gain access to trade secrets in the course of its regulatory activities.[28]

Petitioner cites dictum in a decision of this Court (*Kewanee Oil Co.* v. *Bicron Corp.*, 416 U.S. 470, 476 (1974)), and one court of appeals decision, *E.I. du-Pont deNemours & Co.* v. *Christopher*, 431 F.2d 1012 (5th Cir. 1970), cert. denied, 400 U.S. 1024 (1971), for the proposition that aerial observation is an "improper means" of obtaining a trade secret. See Pet. Br. 47-48. Even if this premise is correct,[29] it does

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[28] There is always the theoretical possibility, of course, that a trade secret in the possession of the government will be disclosed inadvertently. Thus, it is understandable that petitioner would prefer that the government not obtain possession of any trade secret, even if it has no intention to use it or disclose it. Because of this danger of inadvertent disclosure, it might be said that the government's mere acquisition of a trade secret constitutes some invasion of petitioner's rights (although it would appear to be more its property right in the trade secret than any right protected by the Fourth Amendment). Even if that is true, however, it cannot seriously be doubted that the strong government interests implicated here would outweigh such a small, speculative effect on petitioner's rights. Unfortunately, in today's society, manufacturing facilities frequently produce toxic chemicals that pollute the environment. For example, EPA tests have indicated that waste water discharged by petitioner's Midland facility into an adjacent river contains more than 40 toxic chemicals. See N.Y. Times, Apr. 1, 1983, at A1, col. 1. The strong public interest in enforcing the statutes that regulate this type of pollution outweighs the possibility that information obtained from aerial photography might also contain a trade secret that might inadvertently be disclosed.

[29] The *Christopher* decision is actually somewhat narrower than described by petitioner. In that case aerial photographs were taken of a plant under construction, and it was not con-

not follow that such observation is violative of the Fourth Amendment. First, it is not true that an action that constitutes a tort thereby necessarily or even ordinarily constitutes a Fourth Amendment violation. See *Oliver*, slip op. 11-12. Moreover, because the policies involved in the two situations are so different, there is no reason to suppose that the standards for deciding what is an unfair means of obtaining a trade secret ought to have any bearing on the reasonableness of an action under the Fourth Amendment.

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tested that they were taken for the purpose of appropriating a process that DuPont sought to keep secret. The court, in finding that DuPont had an action under Texas law for misappropriation of a trade secret, relied heavily on the fact that the photographer had used the "trick" (431 F.2d at 1016) of flying over the plant before it could be completed. The court explained that "after construction the finished plant would have protected much of the process from view, [but] during the period of construction the trade secret was exposed to view from the air" (*ibid.*). See also *Hurst* v. *Hughes Tool Co.*, 634 F.2d 895, 898 (5th Cir. 1981). Thus, *Christopher* does not really address the question whether it is improper to appropriate a trade secret by flying over a completed facility that is so constructed that the alleged "secret" is visible to the aerial observer or photographer. Specifically, *Christopher* does not resolve whether, in light of the fact that "the extent of the property right [in a trade secret] is defined by the extent to which the owner of the secret protects his interests from disclosure to others" (*Ruckelshaus* v. *Monsanto Co.*, slip op. 13), a company can have a trade secret in an outdoor plant that is readily subject to aerial observation. Thus, in this case, it is doubtful both as a legal and factual (see note 24, *supra*) matter whether petitioner has a trade secret in the configuration of its outdoor facility. For purposes of the issues presented here, however, we will assume arguendo that petitioner does have such a trade secret. As discussed in text, whether or not private competitors may use aerial photography to appropriate information claimed to be a trade secret has no bearing on whether the Fourth Amendment prohibits the government from using aerial photography for other purposes.

The purpose of the trade secret laws is to prevent unfair competition and promote individual inventiveness. Therefore, the law would quite logically seek to prohibit the acquisition of trade secrets through certain means that do not infringe at all upon the privacy interests protected by the Fourth Amendment.

The Restatement notes in its comments that means for acquiring trade secrets may be improper "even though they do not cause any other harm than that to the interest in the trade secret." 4 Restatement of Torts § 757 comment at 10-11 (1939). For example, the Restatement gives as illustrations of "improper means" of acquiring a trade secret the use of a trespass or inducing employees to breach a duty of confidence to their employer. *Ibid.* Deeming such methods improper under the trade secret laws reasonably furthers the policies of those laws; indeed, the misappropriation before the Court in *Kewanee Oil*, *supra*, was of this sort—a breach of confidentiality by former employees. But it is plain that such activities do not violate the Fourth Amendment. It does not necessarily violate the Constitution for police to obtain evidence by means of a trespass (*Oliver*), and it surely is constitutional for police to obtain information about a criminal enterprise from a former employee turned informant or an undercover operative. See *e.g.*, *Hoffa* v. *United States*, 385 U.S. 293 (1966). By the same token, even if unfair competition law would hold it improper to use aerial observation or photography for the purpose of acquiring a trade secret, that does not suggest that it is unreasonable for the government to use aerial observation to investigate criminal activity or in the exercise of its other regulatory powers.

In sum, neither the existence of a trade secret in an outdoor plant nor any other activity likely to be

carried on in such an area implicates the sort of interest that the Fourth Amendment was designed to protect. Thus, both prongs of the *Katz* test suggest that petitioner has no legitimate expectation of privacy from aerial photography with commercially available equipment, and hence that the Fourth Amendment does not prohibit such photography. The technique is freely available to the public, and therefore petitioner can have no subjective expectation that its outdoor facility will not be photographed from the air. And the privacy interests implicated are sufficiently slight that society would not regard it as reasonable to protect them at the expense of constricting the government's ability to utilize an effective technique that materially assists in the exercise of important governmental functions.

II. THE USE OF AERIAL PHOTOGRAPHY DOES NOT EXCEED THE SCOPE OF EPA'S STATUTORY AUTHORITY

Petitioner also contends (Br. 41-49) that, regardless of this Court's resolution of the constitutional question, the overflight that took place here was unlawful because EPA's statutory grant of inspection authority does not authorize it to contract for aerial photography.[30] This contention is devoid of textual

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[30] We assume, for purposes of this discussion, that aerial photography does not violate the Fourth Amendment. If the overflight here were unconstitutional, we would not contend that the statute must be construed to authorize it, and, in any event, the issue would be insignificant because, regardless of Congress's intent, the overflight would be unlawful. For this reason, we regard as quite irrelevant petitioner's assertion (Br. 46) that the EPA cannot use "other constitutionally offensive scrutiny, such as intrusive aerial photography, which Congress did not specifically list as forbidden." We do not dispute that the EPA cannot use "constitutionally offensive scrutiny"; the issue is whether, as a matter of statutory au-

or other support, and the court of appeals was correct in rejecting it summarily (see Pet. App. A13-A14).

When Congress invests a government agency with law enforcement and investigatory authority, it has never been suggested that Congress must explicitly identify each and every lawful technique that might be used in the course of an investigation. Rather, it is naturally assumed that the agency is entitled to use those methods of investigation that could be undertaken by any member of the general public. Special authorization may be given to use methods that are not available to the public. For example, the Attorney General is given special, express authority to seize private property pursuant to warrant (18 U.S.C. 3107) and to engage in forcible entries in connection with executing a warrant (18 U.S.C. 3109). The enumeration of these specific powers does not implicitly exclude from the Attorney General's broad authority "to detect and prosecute crimes" (28 U.S.C. 533) the power to engage in more mundane investigatory activities, such as following a person or car on the streets or questioning witnesses to a crime.

By the same token, the statutory power conferred on EPA to enforce certain anti-pollution laws (see 42 U.S.C. 7413) must implicitly carry with it the power to use ordinary, publicly available techniques to gather relevant information. There can be little

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thority, the EPA may use constitutionally *permissible* aerial photography. Thus, as petitioner's own characterization reveals, the fact that the EPA cannot use wiretapping without explicit congressional authorization has no bearing on the issue here because that is an investigative technique that is not available to the public, but rather is subject to stringent constitutional and statutory limitations. See *Berger* v. *New York*, 388 U.S. 41 (1967); Omnibus Crime Control and Safe Streets Act, 18 U.S.C. 2510 *et seq.*

doubt that EPA officials can do research in the library, inspect public records of a company's building permits at a local government office, place air quality monitors on public property downwind from a pollution source, or stand on the public highway and observe (or photograph) a pollution source (see *Air Pollution Variance Board* v. *Western Alfalfa Corp.*, 416 U.S. 861, 864-865 (1974))—all without specific statutory authorization. By the same token, they ought to be able to use aerial photography to the same extent that that technique is lawfully available to the general public. Indeed, we are aware of no statute that expressly confers upon a government agency the general authority to use aerial photography for investigative or regulatory purposes, but, as noted above (at 22-23), this technique is frequently used by numerous agencies for diverse objectives, law enforcement and otherwise. Thus, there is no basis for petitioner's suggestion that aerial photography by EPA is not authorized simply because it is not specifically mentioned in the statute.

Congress has conferred upon the EPA special investigative powers to aid it in its enforcement mission. Under Section 114 of the Clean Air Act, 42 U.S.C. 7414, the EPA may prescribe recordkeeping requirements and the installation of monitoring equipment. More important, the statute gives appropriate EPA officials the right to enter the premises of any person who owns or operates an emission source in order to look at these records, sample emissions, and generally conduct an inspection. There is no suggestion in the statute, however, that the powers conferred by Section 114 are intended to be exclusive.[31]

[31] The enforcement provision of the statute is broadly worded to authorize the Administrator of EPA to act on the basis of "any information available to him," which seems to

Somewhat paradoxically, petitioner nonetheless claims (Br. 43-45) that it is this additional grant of authority that demonstrates that Congress has prohibited the EPA from engaging in aerial photography.

As with most administrative inspection statutes (see, *e.g.*, 7 U.S.C. 136g (FIFRA); 15 U.S.C. 1270 (hazardous substances); 29 U.S.C. 657 (OSHA)), Section 114 of the Clean Air Act prescribes certain procedures to be followed by agency officials in executing their authority to enter private premises, which include presenting their credentials. It is hard to understand petitioner's contention, however, that these requirements should be read to prohibit aerial photography. When agency officials seek access to private premises or to inspect business records, it is obvious that they should identify themselves since their right to enter depends on their status as agents of the government acting pursuant to specific statutory authority. A member of the public would not be entitled to enter the premises to inspect. But when agency officials use some method of investigation that is not an entry and that is available to a private investigator or any other member of the general public and hence does not require specific statutory authorization, there is no reason at all for the entry procedures to apply.

More generally, it is clear that 42 U.S.C. 7414 was enacted in 1970 with the intent of *expanding* the authority of government officials to investigate air pollution. See, *e.g.*, Senate Comm. on Public Works, 93d Cong., 2d Sess., *A Legislative History of the Clean Air Act Amendments of 1970* 829 (Comm. Print 1974) (remarks of Rep. Murphy). If peti-

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contemplate that he will receive information from sources other than those specified in Section 114. See 42 U.S.C. 7413(a)(1), (2) and (3).

tioner's argument were correct, this provision would prohibit EPA inspectors from standing on a public street and looking at the smoke coming out of petitioner's factory. But it would obviously be anomalous to convert this positive grant of authority into an implicit restriction on the EPA's ability to use nonentry investigative methods of the sort available to the general public, particularly when the authority expressly conferred to enter premises at ground level is undoubtedly more intrusive than observation from the public airspace or any other location off petitioner's property. In sum, there is no statutory impediment to EPA's use of aerial observation in aid of its regulatory functions.[32]

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[32] Petitioner also asserts (Br. 47) that allowing EPA to engage in aerial photography would be inconsistent with the Clean Air Act's provision protecting against disclosure of trade secrets. Section 114(c), 42 U.S.C. 7414(c). This contention is difficult to comprehend. A specific statutory provision protecting trade secrets hardly suggests a limitation on investigative techniques; on the contrary, it presupposes that in using its investigative powers the EPA will acquire information that may require protection. See *Marshall* v. *Barlow's, Inc.*, 436 U.S. 307, 339 n.10 (1978) (Stevens, J., dissenting).

It may be that petitioner is contending that the protections of Section 114(c) would not apply to aerial photography (because by its terms that subsection applies only to "information obtained under subsection (a)") and hence that the use of aerial photography is inconsistent with the Act's recognition of the need to protect trade secrets. This argument is flawed. Regardless of the applicability of the disclosure and associated trade secret protections of Section 114(c), such trade secrets (if they exist) would still be protected from disclosure under the Trade Secrets Act, 18 U.S.C. 1905, and the Freedom of Information Act, 5 U.S.C. 552(b)(4) (see *Chrysler Corp.* v. *Brown*, 441 U.S. at 318; 40 C.F.R. 2.119(b)). Indeed, the protection afforded under these statutes appears to be even broader than that under Section 114(c), which excludes "emissions data." The EPA has detailed regulations

CONCLUSION

The judgment of the court of appeals should be affirmed.

Respectfully submitted.

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addressing the need to protect confidential business matters (see 40 C.F.R. 2.201 *et seq.*), and it has specifically addressed the issue of overflights. In May 1978, EPA adopted a policy of promptly notifying companies of overflights in order to give them an opportunity at the outset to claim trade secret protection. See C.A. App. 160.

Finally, as discussed above (see pages 37-42, *supra*), trade secrets are not a genuine concern unless they are used or disclosed; the statutory protection for trade secrets surely does not suggest that EPA is prohibited from taking photographs for its own legitimate internal use. In short, the existence of trade secret protection is a complement to the EPA's ability to gather information through aerial observation, not a prohibition on that method.

* Acting Solicitor General Fried is disqualified in this case.

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No. 84-1259

IN THE

Supreme Court of the United States

October Term, 1985

THE DOW CHEMICAL COMPANY,

Petitioner,

versus

UNITED STATES OF AMERICA,
BY AND THROUGH ADMINISTRATOR,
ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE SIXTH CIRCUIT

REPLY BRIEF FOR THE PETITIONER

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REPLY BRIEF FOR THE PETITIONER

Dow believes that EPA's surreptitious acquisition of detailed aerial reconnaissance photographs of Dow's entire manufacturing facility for use as evidence in enforcement litigation (A. 31-32) is both contrary to Section 114 of the Clean Air Act (42 U.S.C. § 7414) and an unreasonable search in violation of the Fourth Amendment. EPA completely bypassed the Judiciary and engaged in its intrusive quest for evidence — despite both Dow's explicit refusal of consent for a repetitive on-site inspection with a camera (A. 29), and a Dow/EPA discussion about the need for a search warrant (Pribila Affidavit, Exh. A, Dist. Ct. Dkt. 120).

The government does not find fault with the holding of the Court of Appeals that Dow has a reasonable

expectation of privacy from ground level intrusion (Pet. App. A-8). The government does not argue that the Dow facility is an open field from an aerial perspective. The government does not assert that the Dow facility is anything other than a secured, developed commercial structure. The government *admits* "that aerial photography allows more to be seen than mere observation from the air by the unaided human eye" (Gov't. Brief, p. 21). However, the government argues the case on hypothetical facts — that is mere outdoor activity and mere observation, and then erroneously concludes that the principles applicable to mere observation of visible property also control intrusive aerial photography (Gov't. Brief, p. 7). Aerial observation with the naked eye is not at issue.

When applied to the facts of this suit, the cases and authorities cited by the government are either not applicable or they support Dow.

ARGUMENT

I.

EPA UNREASONABLY INTRUDED INTO THE DETAILS OF DOW'S SECURED, DEVELOPED INDUSTRIAL FACILITY — EPA DID *NOT* MERELY OBSERVE OUTDOOR ACTIVITY.

The government incorrectly and persistently mischaracterizes the case by utilizing such terms as "outdoor activity" or "outdoor plant" (over 40 references) and "observation" or "viewing" (over 90 times). Those terms are surely intended to prompt the Court to think of the Dow property as an open field rather than the secured, developed industrial facility that it is. The characterization of EPA's sortie as a mere observation or viewing ignores both the fact that the aerial photography cap-

tured vivid detail beyond the perception of the human eye or mind (Pet. App. B-27; Gov't Brief, p. 21), and the fact that no EPA personnel were even in the plane to observe or view the Dow facility.

Oliver v. *United States*, 80 L.Ed.2d 214, 224-225, and n. 8, 10, 11 (1984)[1] confirms that secured commercial structures such as the Dow property are enclaves that should be free from arbitrary government interference while open and undeveloped "open fields" are not so protected.

Before discussing what arguments the government made and what arguments are conspicuous by their absence, the case should be put into perspective.

The Sixth Circuit Court of Appeals *agreed* with the District Court that Dow has a reasonable expectation of privacy from *ground* level intrusions (Pet. App. A-8). The Court of Appeals then created an internal inconsistency in its own opinion and reversed the District Court's summary judgment ruling on the basis that from an *aerial perspective*, the Dow facility is "like open fields" (Pet. App. A-9). But for the open fields analogy, the Court of Appeals would have found that EPA's actions constituted a search, that *Marshall* v. *Barlow's Inc.*, 436 U.S. 307 (1978) controls, and that Dow's Fourth Amendment rights were violated (Pet. App. A-5). The Court of Appeals is clearly in error in holding that Dow's Midland facility is an open field from the air.

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[1] Contrary to the statement on page 4 of the government's brief, the District Court made its ruling not only on the basis of the panel decision in *United States* v. *Oliver*, 657 F.2d 85 (6th Cir. 1981), but confirmed the correctness of its ruling (Dist. Ct. Dkt. 223), in response to EPA's Second Motion For Reconsideration (Dist. Ct. Dkt. 218), which was based on the *en banc Oliver* decision, 686 F.2d 356 (6th Cir. 1982), which reversed the panel decision.

As depicted in Photograph 3 of the Sealed Joint Appendix[2], Dow's Midland manufacturing facility covers 4500 acres (about 2000 are inside the fence line) and includes 710 buildings and open-air structures which are connected by nearly 40 miles of roadways, where thousands of employees in 80 production plants (all within the fence line) manufacture about 500 products. It is hard to imagine a more secured and developed manufacturing complex (Pet. App. B-19-21). The degree of development is reflected in the more than $10 million in property taxes the Dow Midland manufacturing facility pays each year. This is not the "unoccupied or undeveloped" open fields referenced in *Oliver, supra* at 225, n. 10.

Photograph 1 in the Sealed Joint Appendix depicts one of the dozens of open-air plants in the secured Dow Midland facility. An "open-air" plant is a three-dimensional commercial structure which encompasses the production equipment and know-how and which does not have a traditional roof. Plants are designed as open-air production processes for reasons of worker safety, economics and industry custom (A. 59-60, 64-65, 71-72 and 74). For instance, routine maintenance in the plant shown on Photograph 1 requires cranes with 100-foot booms to move equipment weighing up to 50 tons (A. 75). A roof is not needed and would be totally impractical from an engineering standpoint (A. 74). With respect to the issues in this case, physical "protection" from mere aerial observation is unnecessary since the

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[2] Contrary to the assertion in n. 5 on p. 18 of the government's brief, Photograph 3 is a Dow photograph and *not* a photo taken for EPA. Photograph 3 is representative of what a person would "observe" unaided from the air. It, and a demonstrative enlargement found at Dist. Ct. Dkt. 172, was used to easily distinguish between "mere observation" and the intrusive, detailed EPA aerial Photographs 1 and 2.

complexity and the smallness of the detail is its own protection from the unaided aerial human eye (*cf.* Photograph 1 *versus* Photograph 3).

Private homes and outbuildings are clearly depicted on Photograph 1 (one of many EPA photographs showing non-Dow property). The homes are in the lower right-hand corner of the photograph. Moving "up" the photograph, one traverses the county road, the Dow 8-foot fence, the berm (roughly 50 yards in from the fence; part of the snow-covered berm is hard to distinguish since it parallels the afternoon sun rays and does not create a shadow), and then enters the 30-acre production plant (A. 74-76). Turning to Photograph 2, which is a 60% overlap of Photograph 1[3], the manufacturing plant is now in the lower part of the frame and Dow's West Side Power Plant (one of the targets of EPA's quest) is "above" the production plant.

Looking at the 30-acre manufacturing plant on either Photograph 1 or 2, it is easy to see how interrelated the two major buildings (the building with the tan roof in the "upper" portion of the plant, and the building housing the control room with the flat, snow-covered roof near the center of the plant) are to the other contiguous parts of the commercial structures which com-

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[3] Contrary to n. 1 on p. 3 of the government's brief, the two frames selected as representative of what EPA did and what Dow was trying to protect were frames 9505 and 9506 — not 8505 and 9506. The consecutive frames are important because it is the 60% forward overlap (A. 43) that allows stereoscopic viewing which shows depth (*e.g.*, the height of tanks) (Lake Depo. I, pp. 82-83, Dist. Ct. Dkt. 41). Such work is done with original contact prints, as Photographs 1 and 2, *not* with enlargements. Photointerpretive analysis was requested by EPA on the photos of Dow (A. 44). EPA people with experience in photographic analysis, enhancement or reconnaissance examined the photographs (A. 36). Both frames 9505 and 9506 were enlarged 10× and 20×for demonstrative purposes (*See*, Dist. Ct. Dkt. 171, under seal).

prise the production process. In fact, Photograph 4 shows that process equipment abuts the control room building, which is the snow-covered roofed structure in the upper right corner of the photograph.[4]

Photograph 4 also shows that walking through the plant is similar to walking on a city street lined by tall buildings. Contrary to the government's statement on p. 49 of its brief (substituting, of course, the phrase "detailed aerial photography" for mere "observation"), the authority expressly conferred on EPA to enter premises at ground level for specific purposes is undoubtedly *not* more intrusive than detailed aerial photography. Such surreptitious photography amounted to a nonparticularized, general, fence-to-fence search which captured much more detail of the *entire* 2000-acre secured facility than an on-site inspection ever could.

The minute details of the plant which are so important to Dow, which are not visible by aerial naked-eye observation, and which establish the constitutionally-offensive intrusion in this case, are contained on the *original* EPA contact prints — Photographs 1 and 2 in the Sealed Joint Appendix. The government, apparently forgetting that it made enlargements of the very plant in question (Dist. Ct. Dkt. 15, under seal)[5], attempts to cloud the issue

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[4] The Dow enlargements were made for demonstrative purposes such as this. Photointerpreters use the original contact prints for their work — not enlargements such as Photographs 4 or 5.

[5] EPA made three complete sets of contact prints along with 50 2 × enlargements (5 each of 10 frames) (A. 42). At page 3 of its brief the government leaves the impression that only one significant enlargement was made. A number of the enlargements of the power house made by EPA depict the *exact* manufacturing facility shown in Photographs 1 and 2 of the Sealed Joint Appendix (Dist. Ct. Dkt. 15). The government erroneously states that Dow made the only enlargements of consequence and also that Dow does not assert the existence of private information in the pictures of the power plants (*e.g.*, Gov't. Brief, pp. 28, 31 and 40 n. 27).

and persuade the Court that the offensive detail is only on the Dow enlargements (Gov't. Brief, pp. 27-28).[6] Using hand-held magnification and the original EPA contact prints, the Dow plant manager discerned items and equipment as small as ½-inch in diameter (A. 53-54). Of course, that is not surprising since a naked-eye study of those original contact prints reveals both power lines and their shadows.

NOWHERE IN ITS BRIEF DOES THE GOVERNMENT ARGUE, OR CITE ANY AUTHORITY, THAT THE DOW FACILITY IS AN OPEN FIELD. The government does discuss cases such as *Hester* v. *United States*, 265 U.S. 57 (1924) and *Oliver*, *supra*, but it never relates those cases to the facts of this case. Rather, the government gives "secured, open-air commercial structure" the extremely loose translation of "outdoor activity or plant," and equates "intrusive, detailed aerial photography" with "observation or viewing," and hopes for the best.

Dow urges the Court to think "secured, developed open-air commercial structure" and "detailed aerial photography" whenever the government uses the terms "outdoor plant or activity" and "observation."

The government does not argue that the Dow property is anything other than a secured, developed industrial facility. That fact alone takes the case out of the *Hester* "open field" ambit and places it within the purview of *Marshall* v. *Barlow's Inc.*, *supra*. The fact that the "windows" in the Dow structure open to the vertical, rather than the horizontal, perspective is of no constitutional significance. The significance is the exploitation of

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[6] Whatever detail is depicted on the enlargements is also necessarily found on the original contact prints. The government implies (p. 29) that by "manipulating" and enlarging the photos Dow somehow created new images not captured on the original EPA photos.

technological advances to intrude into a secured, developed commercial structure to reveal details about the interior of the premises that could *not* have been obtained by mere visual surveillance. *United States* v. *Karo*, 82 L.Ed.2d 530, 536, 541-2 (1984) *reh. den.* 82 L.Ed.2d 942.

The government on page 21 of its brief admits that "aerial photography allows more to be seen than mere observation from the air by the unaided human eye." Conspicuous by its absence, the government does *not* go on to argue that the photographic detail it captured of the Dow facility — detail that far exceeded the capabilities of the unaided human eye — was not intrusive surveillance into a secured, developed commercial structure.

Rather, the government ignores the facts of the case and basically argues that "observation" ought to be allowed.[7] Then, with no distinctions as to quality, purpose or authority *re* aerial photography, the government arrives at the sweeping but unsupportable conclusion that "[t]he same principles [concerning government aerial observation] apply when a photograph is taken from an airplane flying overhead" (Gov't. Brief, p. 7).

Since this is neither a "plain view" nor an "open field" nor a "mere observation" case, cases such as *Texas* v. *Brown*, 460 U.S. 730 (1983), *Air Pollution Variance Board* v. *Western Alfalfa Corp.*, 416 U.S. 861 (1974), *Hester* v. *United States*, *supra*, and the many marijuana overflight/mere

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[7] The government ignores both its admission that aerial photography is more powerful/intrusive than mere observation and the fact that the EPA did not even attempt to "observe" the Dow plant. A contractor was hired to take about 100 color shots of the entire Dow facility for the express purpose of capturing the details of the operation for use as evidence and for photointerpretive work (A. 32, 39, 43, 44, 46).

observation cases cited in the government's brief do not support the government's argument. Here, the government used technology to intrude into the non-visible details of Dow's secured facility. The technology of a certified mapping camera did not merely enhance the human visual sense, as a flashlight does; it goes far beyond human capabilities and accomplishes a feat no moving, airborne human eye could do. The camera perceived and captured minute detail, the smallness of which is protection from mere human aerial observation. The surreptitious use of a technological aid to intrude into a secured commercial structure, into details not discernible by visual surveillance, violates the Fourth Amendment. *United States* v. *Karo, supra* at 541.

A search occurs when there is an unreasonable governmental intrusion upon a reasonable expectation of privacy; a seizure occurs when there is a meaningful interference with a possessory interest in property. *United States* v. *Jacobsen*, 466 U.S. 109, 80 L.Ed.2d 85, 94 (1984). The laws protecting trade secrets and *Marshall* v. *Barlow's Inc.*, 436 U.S. 307 (1978), were cited by Dow in its Brief on the Merits to buttress the already-strong argument that Dow's expectation of privacy in the non-public details of its secured commercial structures was an expectation that society deems reasonable. The government's argument beginning on page 37 of its brief concerning the capturing of trade secrets on the photographs misses the point. It is the intrusive surveillance of detail (trade secret or otherwise) beyond the purview of the naked eye that constitutes the Fourth Amendment violation. The Fourth Amendment violation exists independently of the capturing of any Dow trade secrets.

Dow's motive in this case is to protect its trade secrets (assets) and commercial competitiveness. Dow's interest is to preserve its right to privacy and right to be free

from unreasonable government search in the form of intrusive aerial photography.

II.

EPA'S AERIAL PHOTOGRAPHY PROMOTES NO LEGITIMATE GOVERNMENTAL INTEREST.

"[T]he permissibility of a particular law enforcement practice is judged by balancing its intrusion on . . . Fourth Amendment interests against its promotion of legitimate governmental interests." *Delaware* v. *Prouse*, 440 U.S. 648, 654 (1979). There are no legitimate governmental interests to balance against the severe intrusion upon Dow's privacy in this case. In addition, aerial photography is not a "law enforcement practice." The EPA's action was entirely unchecked and without reasonable safeguards.

As stated in its Brief on the Merits, Dow believes that aerial photography as a site inspection technique is totally outside of EPA's statutory inspection authority. 42 U.S.C. § 7414.

EPA promoted no legitimate governmental interest in this case. The photographs showed no smoke coming from the powerhouses (A. 31), and thus they were worthless as evidence in the enforcement action. The aerial photography was a wholly ineffective technique that lent no assistance to any legitimate governmental function.

When the nature and quality of the intrusion on Dow's Fourth Amendment rights are balanced against the government's actions in this case, EPA's conduct is clearly unreasonable. *Cf., United States* v. *Jacobsen, supra* at 101. There are no governmental interests, much less important ones, proffered to justify the intrusion. In

fact, long before the overflight the government had all the evidence against Dow that it needed (A. 27-28).

The nature and quality of the intrusion clearly establish constitutionally offensive scrutiny. The magnitude of the surreptitious, continuing intrusion is shocking. The agency did not take one brief look at specific structures in the Dow facility in which they arguably have an interest. The agency conducted an exploratory search of the entire 2000-acre Dow facility, permanently capturing in vivid detail Dow personal property not otherwise exposed to view.

EPA had a number of alternatives to aerial photography. For instance, under section 114(a)(1) of the Clean Air Act the Administrator may *require* any site owner to maintain records, make reports and provide such other information as required. 42 U.S.C. § 7414 (a)(1). As the record reflects, Dow had provided all the schematics and diagrams of the powerhouses that EPA requested prior to the time of the overflight (A. 25, 28). EPA had requested no further information from Dow.

The giving of information to the EPA (as opposed to surreptitious taking by EPA) allows the owner to claim trade secret protection according to 42 U.S.C. § 7414(c) and 40 C.F.R. 2.201, *et seq*. Otherwise, as in the case of aerial photographs and photointerpretive reports, unmarked documents are considered to be in the public domain and available under the Freedom of Information Act (5 U.S.C. § 552) to the extent the requestor is willing to pay for reproduction (Trakowski Depo., pp. 26-30, Dist. Ct. Dkt. 42).

In its nonchalant discussion of its possession of the intimate details of Dow's raison d'être, the government (Gov't. Brief, pp. 9, 40) attempts to lessen the actual intrusion upon Dow's rights and privacy. However, in

the two months after the flyover and before the film and photos were placed under seal, the EPA shipped the film and photos to and from their photographic labs in Las Vegas via airline baggage/air freignt (A. 41; Beyer Depo., p. 79, Dist. Ct. Dkt. 30). Once the film and enlargements were back in Chicago, the enlargements were kept on heating ducts, on the floor and hung on office walls, which offices had no doors (A. 52-53; Rothblatt Depo., pp. 36-37, Dist. Ct. Dkt. 33). The pictures were seen by other than "need to know" persons (Rothblatt Depo., pp. 54-55, Dist. Ct. Dkt. 33; Beyer Depo., pp. 79-83, Dist. Ct. Dkt. 30).

All of the film, prints and enlargements were to be placed into the custody of the District Court and under seal per a stipulated order entered April 7, 1978 (A. 3; Dist. Ct. Dkt. 15). Despite that order, EPA "found" an "extra" roll of prints in its possession in July, 1978 (Lake Depo., p. 100, Dist. Ct. Dkt. 41). Contrary to the government's position (pp. 9, 40), EPA's actions with respect to Dow's personal property do cause Dow great concern.

Although the government asserts (p. 45) that aerial photography "materially assists" EPA in "the exercise of important governmental functions," the government never offers an explanation of how it materially assists or what important government functions it references. On the bottom line it boils down to the fact that the government had no need (or authority) for its actions and it has nothing but empty rhetoric in defense of its unauthorized, intrusive conduct.

III.

THE GOVERNMENT'S ARGUMENTS DO NOT CORRESPOND TO THE FACTS.

In addition to confusing mere observation and detailed aerial photography, the government attempts to put aerial photography rather than its own conduct under scrutiny (Gov't. Brief, p. 32). This is not a case against aerial photography any more than a wiretap case is against the equipment employed, or a murder case is against the gun or other weapon, or other surveillance cases are against telescopes or beepers. *E.g., United States* v. *Karo,* 82 L.Ed.2d 530 (1984); *Katz* v. *United States,* 389 U.S. 347 (1967); *Berger* v. *New York,* 388 U.S. 41 (1967); *United States* v. *Kim,* 415 F.Supp. 1252 (D. Ha. 1976); *United States* v. *Lace,* 669 F.2d 46 (2nd Cir. 1982), *cert. den.* 459 U.S. 854; *United States* v. *Taborda,* 635 F.2d 131 (2nd Cir. 1980). It is the exploitation of technological advances that implicates the Fourth Amendment, not their mere existence. *United States* v. *Karo, supra,* at 539-540.

In its argument the government refuses to acknowledge that all aerial photographs are not alike. The variables are numerous, including perspective (vertical or oblique), resolution, weather conditions, camera and quality. In conjunction with its security measures against unauthorized aerial photography (A. 13-22), Dow does release photographs of the production facility *after* internal review (A. 20). Although Dow tries to get a credit line (*e.g.,* Photo Courtesy of The Dow Chemical Company) (A. 13), sometimes it appears (Federal Prying From The Sky, *NATION'S BUSINESS,* October 1985, pp. 34, 36), and sometimes it does not (The EPA's Eye In The Sky Has Companies Seeing Red, *BUSINESS WEEK,* October 28, 1985, p. 90). In any event, those photographs released by the company are taken at an oblique

angle and have passed internal muster. They are obviously and easily distinguishable from the EPA photographs (*cf.*, Photographs 1 and 2, Sealed Joint Appendix).

In its brief the government places importance on the fact that the detailed aerial photographs were taken from public airspace. So what? The question is whether the surveillance intruded into Dow's reasonable expectation of privacy. *Katz* v. *United States, supra.* It did. The photographs captured and depicted more detail and information than the unaided aerial human eye and mind could ever hope to do (Pet. App. B-27; Gov't. Brief, p. 21). It is inconceivable that the government can intrude so far into a developed commercial structure that it can detect items and equipment as small as ½-inch in diameter and still not be considered to have engaged in an unreasonable search. *Cf., United States* v. *Kim, supra,* at 1256; *United States* v. *Lace, supra;* and *United States* v. *Taborda, supra.*

The fact that the photos were taken from lawful altitude is of no moment.[8] FAA regulations were designed to promote air safety, not to define reasonable expectations of privacy. *See, State* v. *Davis,* 627 P.2d 492, 494 (Or. App. 1981).

In its attempts to make aerial photography seem ordinary and mundane, the government: fails to recognize that all aerial photographs are not of like quality and

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[8] The minimum altitude over a congested area is not 1000 feet, as the government states at p. 19. Rather, it is 1000 feet above the highest obstacle within a horizontal radius of 2000 feet of the aircraft. 14 C.F.R. § 91.79. Although there is no "nearby tall building or water tower" with reference to the Dow facility as speculated in n. 4 on p. 17 of the government's brief, there are structures within the Dow facility that are over 200 feet high.

resolution[9]; fails to admit that the EPA photographic labs are set up for vertical aerial mapping cameras and printers (A. 51), not the hypothetical hand-held camera; fails to acknowledge that the Michigan Department of Natural Resources photograph (referenced at Gov't. Brief, p. 23 and at A. 54 and filed as a part of the record by EPA — Dist. Ct. Dkt. 167) bears absolutely *no* resemblance to the intrusive detail contained in the EPA photographs of the Dow plant; and finally, fails to acknowledge that *the only photographs taken of Dow's Midland facility at the request of EPA are the subject of this lawsuit* (A. 33), and that the agency's own enforcement personnel thought the photos were novel (Beyer Depo., p. 81, Dist. Ct. Dkt. 30; Rothblatt Depo., pp. 54-55, Dist. Ct. Dkt. 33).

The EPA aerial photographs of Dow's facility are not ordinary or mundane. To the best of Dow's knowledge, they are intrusively unique.

IV.

AERIAL PHOTOGRAPHY FAR EXCEEDS THE SCOPE OF EPA'S STATUTORY AUTHORITY.

The government's position on this issue is accurately and succinctly stated in its Summary of Argument (p. 10): the EPA assumed it could use the investigation technique and then assumed the power.[10] As noted on pages 42-49

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[9] Although aerial photography may be "common" in the sense that it can be acquired for a price, the government certainly slights the capabilities of aerial photography and the training of aerial photographers when it equates aerial photography and mere visual observation in its brief, pp. 17-21. *See generally*, MANUAL OF COLOR AERIAL PHOTOGRAPHY, American Society of Photogrammetry (1968).

[10] At one point EPA also "assumed" it could utilize the military to aid in civilian law enforcement (about 50-60 times over 9 years) — clearly in violation of the *Posse Comitatus Act*, 18 U.S.C. § 1385. (Dybdahl Depo., pp. 62, 87-88, Dist. Ct. Dkt. 49).

of Dow's Brief on the Merits, that assumption of power is without statutory authority, is contrary to the plain language of section 114(a)(2) of the Clean Air Act (42 U.S.C. § 7414(a)(2)), and is inconsistent with both section 114(c) of the Act and existing tort and criminal laws protecting trade secrets. Neither the Court of Appeals' decision nor the government cites any authority to the contrary.

On page 10 of its brief the government blithely asserts that "the agency is entitled to use any methods of investigation that could lawfully be employed by private investigators." The government then ignores the fact that if private individuals procured aerial photographs such as EPA's Photographs 1 and 2 in the Sealed Joint Appendix, Dow would press charges in both the criminal and civil courts. Michigan Compiled Laws sections 752.772, 750.539a and d (Pet. App. E); Restatement of Torts section 757 (1939) (Pet. App. C); *Kewanee Oil Company* v. *Bicron Corporation*, 416 U.S. 470, 475-476 (1974); and *DuPont* v. *Christopher*, 431 F.2d 1012 (5th Cir. 1970), *cert. den.* 400 U.S. 1024 (1971).

The government's citation (p. 46) to what federal *law enforcement* agencies may do in support of what this *administrative* agency can do is especially distressing. That argument confuses the basic differences in purpose and function among the agencies, ignores the explicit, different terms of statutory authority granted to each agency, and amounts to the repugnant bottom line that "the government is the government and as long as any agency has the power, all agencies have the power." Apparently some in the federal government forget that it is a government of limited powers.

The government states (p. 48) that the Clean Air Act, first enacted in 1970, somehow "expanded" the government authority to investigate air pollution. The actual

statement made does not support the government's argument. The type of statement cited by the government, remarks made during Senate Committee hearings, are generally not used as statutory construction aids — especially when there is plain meaning in the language employed by Congress. *Federal Trade Commission* v. *Raladam*, 283 U.S. 643, 650 (1931).

Under the government's interpretation, section 114(a)(2) "devolves almost unbridled discretion upon executive and administrative officers, particularly those in the field, as to when to search and whom to search," the very situation in *Marshall* v. *Barlow's Inc.*, 436 U.S. 307, 323 (1978) (OSHA inspection) which violated the Fourth Amendment.

Unlike OSHA, which after public notice and comment adopted regulations concerning site inspections (29 C.F.R. § 1903, *et seq.*), EPA has no regulations governing inspections or its inspectors. EPA has assumed powers not reasonably within the plain meaning of Congressional language, and has gone about its self-perceived business without public or judicial oversight. EPA has combined unbridled discretion with an extremely intrusive inspection technique.

The government states (n. 32, p. 50), that EPA specifically addressed the issue of overflights in a May 1978 *internal* policy (no public notice and comment). Contrary to the implication in the footnote, the notification of companies after an overflight (not applicable to this case) was not an agency policy. It was merely a Region V program (C.A. App. 160). As documented at pages 86-93 of the Joint Appendix, Regions II and VII attempted prior notification, which evoked the same corporate concern for Fourth Amendment rights and trade secrets that Dow asserts here.

CONCLUSION

For the foregoing reasons, as well as those stated in Dow's Brief on the Merits, the judgment of the Court of Appeals should be reversed.

Respectfully submitted,

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IN THE

Supreme Court of the United States

OCTOBER TERM, 1984

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Petitioner,

v.

UNITED STATES OF AMERICA
BY AND THROUGH ADMINISTRATOR,
ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

ON WRIT OF CERTIORARI TO THE
UNITED STATES COURT OF APPEALS
FOR THE SIXTH CIRCUIT

BRIEF OF MICHIGAN MANUFACTURERS' ASSOCIATION, THE OHIO MANUFACTURERS' ASSOCIATION AND MID-AMERICA LEGAL FOUNDATION AS *AMICI CURIAE* SUPPORTING PETITIONER

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This brief *amici curiae* in support of petitioner is submitted with the written consents of counsel to all parties filed with the Clerk of the Court.

INTEREST OF AMICI

Michigan Manufacturers' Association is a business association organized to study legal and administrative matters of general interest which promote the interest of Michigan businesses and the public generally.

The Ohio Manufacturers' Association is a nonprofit trade association representing approximately fourteen hundred manufacturers with facilities located in Ohio. The Association seeks to promote a healthy industrial climate for the benefit of the general welfare throughout the state.

Mid-America Legal Foundation was organized in 1975 to support the public interest in preserving the economic and political freedoms of our democratic society.

These *amici* have an interest in the disposition of this case because the opinion below interprets the Fourth Amendment in a way which effectively deprives any industrial or commercial enterprise of an expectation of privacy in its open air plant operations which are secured from public view on the ground, but visible from the air through the use of enhanced photographic techniques. If the court of appeals' decision is allowed to stand, it will be virtually impossible for industry to protect the privacy of its manufacturing processes.

SUMMARY OF ARGUMENT

EPA's aerial surveillance of Dow's Midland plant was a "search" within the meaning of the Fourth Amendment since Dow possessed a reasonable expectation of privacy in the areas of its plant that were surreptitiously photographed by EPA. Dow's subjective expectation of privacy was evidenced by its extensive plant security, and this expectation was reasonable in light of a manufacturer's significant proprietary and monetary interest in the design and operation of its plant. Furthermore, the interior regions of Dow's facility cannot be characterized as an "open field" to vitiate Fourth Amendment protection.

The EPA search of the Midland facility was unreasonable. As a general rule, warrantless administrative searches are prohibited, except in circumstances where there is an important need for these inspections and the intrusion is into an area where there is a low expectation of privacy. EPA's aerial surveillance undertaken in this case meets neither of these criteria.

Although legislative authorization of warrantless searches has been sustained where a statute narrows government discretion and specifies in considerable detail the circumstances under which such a search may be conducted, the Clean Air Act provides no justification for EPA's search of the Dow plant. This Act sets forth no limit on the time, place, manner or scope of EPA's authority to conduct inspections, and yet such detail is required if warrantless searches are to comport with constitutional requirements. The unreasonableness of the intrusion on Dow's privacy was further exacerbated by the use of highly sophisticated enhanced viewing equipment.

Finally, use of a third party by EPA to conduct the aerial surveillance violated Section 114(a)(2)(A) of the Clean Air Act. Unless this section is construed to authorize only EPA personnel to conduct inspections, the policy behind protecting trade secrets and holding government officials accountable for disclosure of confidential information will be undermined.

ARGUMENT

I. EPA's Aerial Surveillance was a "Search" Within the Purview of the Fourth Amendment.

A. The Government Intruded Upon Dow's Reasonable Expectations of Privacy.

In its decision below, the Sixth Circuit held that EPA's photographic flyover of Dow's Midland property did not constitute a Fourth Amendment search.[1] *Dow Chemical Co. v. United States,* Pet. Cert. App. A-2. The court legitimately viewed the word "search" as "a term of art with special constitutional significance," *id.,* but it proceeded to apply the term with rather too much art and too little common sense. A straightforward reading of this Court's previous cases merits the conclusion that EPA's aerial surveillance does indeed qualify as a "search" within the Fourth Amendment's purview.

"A search ordinarily implies a quest by an officer of the law." *Hale v. Henkel,* 201 U.S. 43, 76 (1906). This direct approach has of course been modified to reflect the complexities of modern day search and seizure cases, but it remains true, as the late Chief Justice Warren pointed out in *Terry v. Ohio,* 392 U.S. 1, 18 n.15 (1968), that "the Fourth Amendment governs all intrusions by agents of the public upon [private] security.... This seems preferable to an approach which attributes too much significance to an overly technical definition of 'search'...."

Generally, the question of whether government action amounts to a "search" cognizable under the Fourth Amend-

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[1] The court did not directly address the following statement made by the district court: "the Court wishes to point out that the EPA has admitted, both in its briefs and at oral argument, that the flyover constituted both a 'quest for evidence' and a 'search' of Dow's plant." *Dow Chemical Co. v. United States,* Pet. Cert. App. B-6.

ment depends upon whether the area scrutinized is one in which there exists a reasonable expectation of freedom from governmental "intrusions" and "quests". This "expectation of privacy" analysis first emerged in *Katz v. United States*, 389 U.S. 347, 353 (1967), which held *inter alia* that the government's activities in electronically listening to and recording a telephone booth conversation violated the privacy upon which Katz justifiably relied and thus constituted a search within the meaning of the Fourth Amendment. Justice Harlan in concurrence proposed a two part standard for determining when a privacy expectation is of sufficient importance that government action in derogation thereof is properly characterized as a search. 389 U.S. at 361. As amplified in *Smith v. Maryland*, 442 U.S. 735, 740 (1979), this test states that

> the application of the Fourth Amendment depends on whether the person invoking its protection can claim a 'justifiable,' a 'reasonable,' or a 'legitimate expectation of privacy' that has been invaded by government action [citations omitted]. This inquiry, as Mr. Justice Harlan aptly noted in his *Katz* concurrence, normally embraces two discrete questions. The first is whether the individual, by his conduct, has 'exhibited an actual (subjective) expectation of privacy,' 389 U.S., at 361—whether, in the words of the *Katz* majority, the individual has shown that 'he seeks to preserve something as private.' *Id.* at 351. The second question is whether the individual's subjective expectation of privacy is "one that society is prepared to recognize as reasonable", *id.*, at 361—whether, in the words of the *Katz* majority, the individual's expectation, viewed objectively, is 'justifiable' under the circumstances. *Id.* at 353.

Viewing the present case in light of these *Katz* criteria, EPA's photographic flyover impinged upon Dow's reasonable expectations of privacy in the Midland plant's unroofed connecting areas, and thus triggered application of the Fourth Amendment. That Dow possessed a subjective expectation of privacy in the scrutinized areas is abundantly demonstrated by the record and substantiated by the company's perseverance in pursuing the present protracted litigation. It is senseless to

suppose that a profit-maximizing corporation like Dow would undertake the multimillion dollar security precautions described by the district court, Pet. Cert. App. B-20,21, if it had no interest in shielding the Midland facility from undesired reconnaissance. The court of appeals determined, however, that Dow lacked a subjective expectation of privacy in the areas at issue because the company's "objective behavior [did] not indicate an expectation to be free from the aerial spectator." Pet. Cert. App. A-8. Yet the record shows that antiaircraft measures were an explicit component of Midland's security plan at the time of EPA's overflight. Jt. Appen., Ct. App., 291-306. These measures could not deter every conceivable cursory observation of Midland's interior by aerial passersby. This does not alter the fact that Dow subjectively expected freedom from detailed aerial intrusion any more than the possibility that some of Katz's conversation could conceivably have been heard through the closed door by someone waiting to use the phone booth altered Katz's subjective expectation of freedom from detailed monitoring and recording of his words. Dow sought to preserve, by the most reasonable means available, the privacy of Midland's unroofed space from aerial scrutiny. And as *Katz* teaches, "what [someone] seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected." 389 U.S. at 351.

Turning to the second prong of the *Katz* test, it is clear that Dow's subjective expectation of privacy is justifiable under the circumstances of the present case. This Court has acknowledged generally that governmental action that conflicts with corporate privacy interests implicates the Fourth Amendment. *See, G.M. Leasing Corp. v. United States,* 429 U.S. 338 (1977). Society ought to be prepared to deem Dow's expectation of privacy reasonable because, as this Court has long noted, the Fourth Amendment "should receive a liberal construction, so as to prevent stealthy encroachment upon or 'gradual depreciation' of the rights secured by [it], by imperceptible practice of courts or by well-intentioned but mistakenly over-zealous exec-

utive officers." *Gouled v. United States,* 255 U.S. 298, 304 (1921).

Revelation of the make-up, configuration and management of Midland's secluded structure "exteriors" and adjacent "open spaces" threatens Dow with the loss of a competitive edge should such information come within the grasp of rival manufacturers. Society recognizes the legitimacy of Dow's interest in restricting the dissemination of such confidential information. As the district court pointed out, Pet. Cert. App. B-3, the Midland open-sky areas photographed by EPA are an essential element in the design of large integrated chemical production facilities. Although a reading of the Sixth Circuit opinion would suggest that these areas are mere vacant excess, in fact they contain pipelines, smokestacks, valves, power lines and related equipment, in addition to space consciously set aside by company planners to accommodate foreseeable expansion and design innovations. At Midland these areas are patrolled, monitored, maintained and upgraded by Dow employees. They are as vital to the profitable, efficient and safe operation of the plant as Dow's offices, control rooms, and other enclosed areas.

The chemical industry is capital-intensive and highly competitive. It does not stretch the imagination to realize that Dow possesses a valuable proprietary and monetary interest in preventing the free appropriation by its competitors—by means of the photographs now held by EPA or through any other source—of its sizeable continuing investment in how it designs, engineers, and utilizes Midland's open areas.

That society deems "reasonable" a corporation's expectation that it may keep costly proprietary information private in order to forestall erosion of its hard-won market position requires little demonstration. A host of state and federal statutes recognize the importance to our nation and our economy of allowing businesses to maintain the privacy of their commercial advantages. To cite just two prominent examples,

Congress at 5 U.S.C. § 552(b)(4) exempted trade secrets and confidential commercial information from the wide scope of the Freedom of Information Act's disclosure requirements, and at 18 U.S.C. § 1905 imposed criminal liability upon any federal official who reveals without authorization information relating to "the trade secrets, processes, operations, style of work, or apparatus . . . of any person, firm, partnership, corporation, or association. . . ." Such measures embody the overwhelming social consensus in favor of recognizing the reasonableness of privacy expectations in corporate trade secrets. Dow is clearly justified under the present circumstances in relying on the subjective expectation engendered by this unmistakable public policy.

To recapitulate, the reasonable security measures undertaken by Dow to conceal the Midland plant's unenclosed connecting areas from prying eyes evince the company's subjective expectation of privacy in those areas. This expectation is justifiable and socially reasonable because Dow possesses a significant proprietary and monetary stake in keeping from others the knowledge of how it designs and operates the Midland areas at issue. EPA intruded upon these expectations in its quest for evidence concerning Dow's possible violation of the Clean Air Act. It is precisely this kind of governmental activity that should be evaluated in light of the constitutional standards developed by this Court to determine whether such intrusion was reasonable under prevailing circumstances. EPA's flyover invaded Dow's zone of private security, and therefore constituted a search within the scope of the Fourth Amendment.

B. The Open Fields Doctrine Does Not Apply.

The court of appeals determined that EPA's photographic flyover of Dow's installation was not a search and therefore did not implicate the Fourth Amendment because "Dow's Midland plant is much more like 'open fields' than it is a home or office." Pet. Cert. App. A-9. As the court admitted, the analogy is not

perfect. In fact, the analogy defies common sense and does not accord with this Court's previous decisions. The open fields doctrine simply does not apply to a chemical factory.

The open fields concept evolved from *Hester v. United States,* 265 U.S. 57 (1924), which upheld a visual search conducted by federal revenue agents while trespassing on the open fields of Hester's land. Justice Holmes, writing for the Court, concluded that "the special protection accorded by the Fourth Amendment to the people in their 'persons, houses, papers, and effects' is not extended to the open fields." 265 U.S. at 59.

Recently, this Court reinterpreted *Hester* in light of the privacy expectation framework employed in modern search and seizure jurisprudence, and affirmed the continuing vitality of the open fields doctrine. *Oliver v. United States,* ____ U.S. ____, 104 S. Ct. 1735 (1984). *Oliver* validated a warrantless search of an agricultural field located over a mile from the nearest structure on the ground that the property's owner could assert no reasonable expectation of privacy in such an accessible area. 104 S. Ct. at 1741. The Court explained that "open fields do not provide the setting for those intimate activities that the [Fourth] Amendment is intended to shelter from government interference or surveillance. There is no societal interest in protecting the privacy of those activities . . . that occur in open fields." *Id.*

Dow's Midland plant bears no geographical resemblance to the remote cropland involved in *Oliver* or to the patch of common woods searched in the companion case of *Maine v. Thornton,* ____ U.S. ____, 104 S.Ct. 1735 (1984). As stated earlier, Midland's interior connecting areas are neither "unoccupied" nor "undeveloped." *Oliver,* 104 S. Ct. at 1742 n.11. More importantly, a far greater expectation of privacy exists in the Midland facility than in an open field. As this Court has noted, "open fields usually are accessible to the public and the police in ways that a home, an office or *commercial structure* would not be." *Id.* at 1741 (emphasis added). Dow, on the

other hand, enforces rigid access restrictions in all areas of the Midland installation. *See, Dow Chemical Co.*, Pet. Cert. App. B-20,21. Also unlike an open field, Midland's unenclosed exterior spaces serve as the setting for myriad activities connected with the pursuit of Dow's business, including storage of materials, operation of machinery, and product, safety and emission testing. This Court has recognized the social value (absent in the open field context) in protecting the privacy of such business activities, by extending to them the shelter of the Fourth Amendment. *G. M. Leasing Corp.*, 429 U.S. at 353.

In addition to this obvious divergence between the reasonableness of privacy expectations in a chemical factory like Midland and an open field, there is a second reason why it was erroneous for the court below to apply the *Hester* doctrine to the present facts: the "exterior" and "open" areas at issue are within the curtilage of Midland's enclosed structures. As noted in *Oliver*, "[a]t common law, the curtilage is the area to which extends the intimate activity associated with the [home] ... and therefore has been considered part of home itself for Fourth Amendment purposes." 104 S. Ct. at 1742. The court below declined to apply the curtilage exception to the open fields doctrine in the present case because it found such application inappropriate in a manufacturing setting. Pet. Cert. App. A-11-12. Yet the reasons proffered by the court in justification of this "inappropriateness" lack substantial merit. Although it is true that little authority exists which would extend the curtilage concept beyond traditional dwellings, at least one federal circuit has recognized the plausibility of a commercial or industrial curtilage doctrine. *United States v. Swart*, 679 F.2d 698, 702 (7th Cir. 1982).

Certainly there lurks an analytical flaw in a reading of the Fourth Amendment that accepts the shielding of traditional curtilage because it is associated with the protected privacies of home, but not the shielding of the commercially necessary connecting spaces between industrial buildings which are equal-

ly associated with the protected privacies of business. This Court should not embrace such an irrational double standard as a basis for constitutional rulings. Rather, the cogency of the industrial curtilage doctrine should be recognized, and Fourth Amendment protection accorded to the exterior spaces between Dow's buildings.

In conclusion, Dow's expectation of privacy in every area of its Midland plant is of altogether greater constitutional magnitude than that which may be asserted in an open field. Additionally, the unenclosed areas searched and photographed by EPA are within the curtilage of Midland's structures and therefore protected by the Fourth Amendment. For these reasons, the open fields doctrine does not apply in the present case.

II. EPA's Warrantless Search was Unreasonable.

A. EPA's Warrantless Surveillance Does Not Comport with Constitutional Standards for Administrative Searches.

As a general rule, warrantless administrative searches are prohibited except in certain narrow circumstances. A review of the case law which developed these exceptions mandates the conclusion that EPA's warrantless search of Dow's plant was unreasonable.

The *per se* rule of the unreasonableness of warrantless searches was first applied to the area of administrative searches by the companion cases of *Camara v. Municipal Court,* 387 U.S. 523 (1967), and *See v. City of Seattle,* 387 U.S. 541 (1967). In *Camara,* this Court reviewed the respondent's justifications for the conclusion that administrative searches could be made without a warrant, and reached a contrary conclusion regarding each of them. First, the opinion noted that the individual has an interest in limiting any governmental entry, because the administrative search could provide a pretext for entry to search for criminal evidence, and because regu-

latory legislation is enforced by criminal processes and sanctions. 387 U.S. at 531. Second, this Court stated that statutory limitations which are interpreted and applied by a government administrator, rather than a judicial officer, left individuals subject to the same discretion—that of the government agent—which the warrant requirement of the Fourth Amendment protects against. *Id.* at 530-533. Finally, the Court found that the important social need to maintain public health and safety could not justify warrantless administrative searches since the goals of the inspection could be achieved even with a warrant requirement. *Id.* at 531.

Thus, *Camara* held that legislative bodies did not have the power to enact warrantless administrative search legislation because, with few exceptions, under the Fourth Amendment any government search must be made pursuant to a warrant to be reasonable.[2]

From the firm principle set in *Camara,* several exceptions have been carved. *Colonnade Catering Corp. v. United States,* 397 U.S. 72 (1970), held that Congress could provide for warrantless searches as part of the inspection process to enforce the laws and regulations governing the liquor industry, without violating the Fourth Amendment, because the liquor industry had been "long subject to close supervision and inspection." 397 U.S. at 77. In the face of such regulatory history, the Court found *Camara* inapplicable. *Id.* at 76.

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[2] *See v. City of Seattle* applied the principle in *Camara* to commercial premises as well as private residences. The Court said, "[a]s we explained in *Camara,* a search of private houses is presumptively unreasonable if conducted without a warrant. . . . The businessman, like the occupant of a residence, has a constitutional right to go about his business free from unreasonable official entries upon his commercial property. The businessman, too, has that right placed in jeopardy if the decision to enter and inspect for violation of regulatory laws can be made and enforced by the inspector in the field without official authority evidenced by a warrant." 387 U.S. at 542.

Similarly, *United States v. Biswell,* 406 U.S. 311 (1972), held that a search by a federal treasury agent authorized by the Gun Control Act was not prohibited by the Fourth Amendment because the interstate traffic of firearms, like the liquor industry in *Colonnade,* was subject to close governmental control. 406 U.S. at 315. In rationalizing this exception, this Court pointed to the social need for governmental control of firearms and the necessity of warrantless searches for effective control because of the deterrent effect of unannounced and frequent searches. *Id.* at 316. The Court also argued that a gun dealer's justifiable expectation of privacy was not threatened by a search because the dealer chose to engage in a pervasively regulated industry and accepted a license with the knowledge that the business would be subject to inspections. Further, the Court reasoned that the Gun Control Act provides the dealer with sufficient notice of authority and limits of inspection. *Id.*

Generally, *Colonnade* and *Biswell* hold that there is an exception to the general requirement of a warrant for an administrative search when there is an important social need for warrantless inspections and the intrusion is into an area where there is a low expectation of privacy. The EPA search in the present case cannot meet the criteria of the *Colonnade-Biswell* exceptions. Although the Clean Air Act notes the need for pollution control, warrantless searches are not necessary for effective attainment of that goal. The chemical manufacturer, unlike the merchant of illegal liquor or firearms, cannot easily conceal or rapidly dispose of violations. In this instance, the slight delay of obtaining a warrant would not hinder enforcement of air quality standards.

Furthermore, it cannot be said that Dow sacrificed any justifiable privacy expectations by engaging in a pervasively and traditionally regulated industry. The chemical industry is subject to the Clean Air Act standards just as other manufacturers. Also, Dow has no license akin to that involved in *Biswell*

which provided its owner with notice of inspection. Finally, the Clean Air Act does not provide the regulated industry with annual notice of authority and limits of inspection as does the Gun Control Act construed in *Biswell.* Unlike the federal statute regulating firearms, which provides such a comprehensible and predictable inspection scheme that warrantless inspections mandated under the statute do not violate the Fourth Amendment, the Clean Air Act merely grants the EPA inspector a broad right of entry. 42 U.S.C. § 7414(a).

B. The Clean Air Act's Grant of Authority to EPA is Not Sufficiently Specific to Authorize Warrantless Inspections.

Subsequent to the development of the *Colonnade-Biswell* exception, Congress provided for warrantless inspection of work places in the Occupational Safety and Health Act ("*OSHA*"), 29 U.S.C. § 651 *et seq.* (1976). These provisions were challenged in *Marshall v. Barlow's, Inc.*, 436 U.S. 307 (1978). In *Barlow's,* a corporation president refused to allow an Occupational Safety and Health Administration inspector to conduct a search without a warrant. The Administration obtained a court order requiring Barlow to admit the inspector, but Barlow again refused and brought suit seeking an injunction prohibiting the warrantless searches conducted by the Administration. 436 U.S. at 310.

The Supreme Court held that OSHA's warrantless inspection provisions violated the Fourth Amendment. This Court distinguished *Barlow's* from *Colonnade* and *Biswell,* and viewed the *Colonnade-Biswell* exception as resting on a theory of implied consent that was not applicable to businesses subject to the broad restrictions of OSHA. The opinion emphasized the additional privacy protection afforded by a warrant requirement, 436 U.S. at 323, and reaffirmed *Camara's* basic principle that a government search of private premises is reasonable only if made pursuant to a warrant. By narrowly interpreting the

Colonnade-Biswell exception as based on the implied consent of those subject to warrantless searches, *Barlow's* reaffirmed the proposition that legislatures do not have unilateral power to enact warrantless search legislation.

Another federal regulatory statute which allowed warrantless inspections was challenged in *Donovan v. Dewey,* 452 U.S. 594 (1981). In *Dewey,* the government sought to enjoin the president of Waukesha Lime and Stone Company from refusing to permit warrantless searches under the Federal Mine Safety and Health Act of 1977 ("*MSHA*"). This Court held that the warrantless inspection provisions of MSHA are reasonable within the meaning of the Fourth Amendment. 452 U.S. at 598-99. The opinion noted that

> a warrant may not be constitutionally required when Congress has reasonably determined that warrantless searches are necessary to further a regulatory scheme and the federal regulatory presence is *sufficiently comprehensive and defined* that the owner of commercial property cannot help but be aware that his property will be subject to periodic inspections *undertaken for specific purposes.*

(emphasis supplied) *Id.* at 600.

The Court recognized the need for warrantless inspections for effective enforcement of MSHA standards, and found that the restrictions placed on the discretion of the administrators charged with enforcing the statutes met the protections provided by a warrant. *Id.* at 605. Specifically, the *Dewey* Court found the following statutory constraints critical to its holding: MSHA requires notification to the operator that inspections will be performed on a regular basis and what standards must be met to comply; MSHA directly curtails the discretion of the officials to determine what facilities to search and what violations to search for; and MSHA provides a specific mechanism for accommodating any special privacy concerns that a specific mine operator might have. Thus, *Dewey* approved the MSHA

warrantless search provision on the ground that the restrictions on administrative discretion in warrantless searches provided for in MSHA were so complete, that the loss of the additional privacy protection of a warrant requirement was justified.

Dewey does not unilaterally authorize legislatures to enact statutes providing for warrantless searches of commercial enterprises. Actually, *Dewey's* interpretation of the *Colonnade-Biswell* exception parallels *Barlow's* interpretation in that an exception to the *Camara* principle will be made only where (1) there is a low expectation of privacy on the part of those subject to the warrantless search, (2) an important social need exists for warrantless searches, and (3) there are sufficient limitations on the discretion of government agents in the use of the inspection powers.

Even under the criteria set forth in *Dewey*, the Clean Air Act cannot be construed to authorize the type of warrantless search conducted by EPA at the Dow facility. The Act does not provide the clearly defined limits on the discretion of government officials authorized to conduct searches which this Court found so critical in *Dewey*. Section 114 authorizes EPA officials to enter the premises to inspect "upon presentation of credentials." 42 U.S.C. § 7414 (a) (2). Unlike the MSHA provisions which authorized the warrantless search at issue in *Dewey*, the Clean Air Act does not similarly limit the time, place, scope or manner of EPA inspections. Without these statutory constraints, the required protections of a warrant requirement are not met. Therefore, the broad grant of authority in Section 114 cannot be construed to authorize warrantless searches.

As noted earlier, while Congress has found that a need exists for control of air pollution, it has not determined that warrantless searches are necessary to achieve this control effectively. The record in this case reveals no indication that requiring EPA to obtain a warrant would constrain the performance of its function under the Clean Air Act. Nor is there

an indication that anything impeded EPA's ability to obtain a search warrant in the first place. In fact, the time, money and energy expended in hiring the private contractor probably exceeded that necessary to obtain a warrant.

C. The Use of Enhanced Aerial Surveillance by EPA was Unreasonable.

In *Katz,* this Court reoriented its Fourth Amendment analysis to concentrate on "people, not places". 389 U.S. at 351. Such a reorientation makes Fourth Amendment protection depend on whether the conduct of government officials exceeds the reasonable expectation of privacy of the target of the investigation. Thus, an unreasonable warrantless search relies on two components: the reasonable expectation of privacy of the target and the intrusion upon that sphere of privacy by government officials. As the court in *United States v. DeBacker,* 493 F.Supp. 1078 (W.D. Mich. 1980), noted in upholding aerial surveillance of defendant's marihuana field,

> The ultimate question, therefore, is not whether the surveillance in this case occurred in 'open fields'. Instead, the issue is whether 'if the particular form of surveillance practiced by the police is permitted to go unregulated by constitutional restraints, the amount of privacy and freedom remaining to citizens would be diminished to a compass inconsistent with the aims of a free and open society.'

493 F.Supp. at 1081, *quoting* Amsterdam, *Perspectives on the Fourth Amendment,* 58 Minn. L. Rev. 349, 403 (1974). Applying this reasoning to the facts in the instant case, the unfettered use by government officials of sophisticated surveillance devices mounted on aircraft carries the most ominous implications for competitive business and society in general. Such devices can apparently be made with virtually unlimited power, if reports about the capabilities of Defense Department satellites are believed. Nothing could be kept from prying

government eyes so equipped—not trade secrets, nor the most intimate details of private life.

Courts have never upheld enhanced aerial surveillance which intrudes upon a reasonable expectation of privacy. It might be argued that *DeBacker* stands for the proposition that aerial surveillance does not constitute an unreasonable search in violation of the Fourth Amendment, since in that case the court upheld a search warrant based on the aerial observation of marihuana growing in the defendant's fields. Such a characterization of the case fails to address properly the *Katz* analysis because it only deals with the actual surveillance, and not the reasonable expectation of the target of that surveillance. In *DeBacker,* the court actually predicated its decision on the lack of any reasonable expectation of privacy of the defendant in his fields owing to the fact that other pilots might have seen the marihuana growing there. 493 F.Supp. at 1081. Similarly, the court in *United States v. Mullinex,* 508 F.Supp. 512 (E.D. Ky. 1980), only held an aerial search passed Fourth Amendment scrutiny because other airplanes frequently flew over the area and the defendant consequently could entertain no reasonable expectation of privacy in his marihuana field: "What was exposed to police aerial surveillance was also exposed to the public." 508 F.Supp. at 514. Therefore, a more precise statement of the rule for aerial surveillance would run: a warrantless aerial search only avoids unconstitutionality under the Fourth Amendment where the government officials see *only what any other pilot would have seen.*

In the instant case, however, EPA was able to see much more than any other pilot flying over the Dow plant, because of its use of sophisticated photographic equipment. The fact that the vision of EPA officials was enhanced far beyond normal human capabilities violated Dow's reasonable expectation of privacy.

The Second Circuit explicitly struck down the use of telescopic equipment to enhance vision in *United States v.*

Taborda, 635 F.2d 131 (1980). The court expressly distinguished between what might have been seen with the naked eye, and what was in fact only discerned with the aid of a telescope, when it dismissed the defendant's conviction for dealing in narcotics:

> The vice of telescopic viewing into the interior of a home is that it risks observation not only of what the householder should realize might be seen by unenhanced viewing, but also of intimate details of a person's private life, which he legitimately expects will not be observed either by naked eye or enhanced vision.

635 F.2d at 139. The court concluded that any enhanced viewing of the interior of a home intrudes upon a legitimate expectation of privacy and consequently runs afoul of the Fourth Amendment. *Id.*

To apply this reasoning to the actions of EPA officials, the method they used to enhance their aerial surveillance was functionally identical to the telescope in *Taborda*. In *Taborda*, the telescope whose use met disapproval possessed a magnification rating of 36, three times the power of a standard pair of binoculars.[3] While the magnification power of the Wild RC-10 which the EPA used is not known, its high-resolution capabilities at least give it the same qualities as a telescope; i.e., that its pictures can be blown up to effectively magnify details. If anything, a powerful camera intrudes slightly more than a telescope because it captures an image which can later be methodically examined. The effective magnification power of the RC-10 must have been at least equal to the *Taborda* telescope; the aerial survey company's brochure described it as the "finest precision aerial camera available." *Dow Chemical Co.*, Pet. Cert. App. B-3. Indeed, considerable magnification is

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[3] The same court later upheld the use of binoculars in *United States v. Lace*, 669 F.2d 46 (1982), *cert. denied*, 459 U.S. 854 (1982). However, binoculars provide only marginally enhanced surveillance, unlike the method employed in the instant case.

required to see pipes as thin as ½ inch in diameter from 1,200 feet as the RC-10 did. Pet. Cert. App. B-3. Such detail would have been impossible to discern with the naked eye at that altitude, and more importantly, Dow reasonably did not expect it to be discernible. Moreover, it does not matter that the Dow equipment scrutinized was located outside any building, unlike in *Taborda*. The only distinction which *Katz* recognizes is delineated by the existence of a reasonable expectation of privacy, and for the reasons discussed in Section I Dow legitimately entertained such an expectation.

Although respondent might argue that *United States v. Allen*, 633 F.2d 1373 (9th Cir. 1980) justifies such enhanced aerial surveillance, a closer reading of the case reveals that it is inapposite. The court upheld the Coast Guard's aerial use of telephotographic equipment to investigage a drug smuggling ring on the Oregon coast. But the court only did so where the *Katz* analysis presented no problems in contravening the defendant's reasonable expectation of privacy:

> Coast Guard helicopters routinely traversed the nearby air space for several reasons, including law enforcement. The residents of the Allen Ranch would, no doubt, have been aware of these routine flights and any reasonable person, cognizant of the ranch's proximity to the coastline and the Coast Guard's well-known function of sea-coast patrol and surveillance, could expect that government officers conducting such flights would be aided by sophisticated electronic equipment. As such, the residents could not reasonably bear a subjective expectation of privacy from the Coast Guard's airborne telephotographic scrutiny . . . .[4]

633 F.2d at 1290. The holding in *Allen* is irrelevant to the present case because, by contrast, Dow did not reasonably

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[4] Such an argument takes the *Katz* analysis too literally. It implies that any government surveillance, if longstanding enough to be expected, and no matter how intrusive, might be valid. To the extent that this argument distorts Fourth Amendment analysis, *Allen* ought to be disregarded altogether.

expect such enhanced aerial surveillance. The record contains nothing to indicate that Dow knew the area was patrolled by government aircraft, much less those carrying sophisticated surveillance equipment.

Similar reasoning applies to *United States v. Lace*, 669 F.2d 46 (2nd Cir. 1982), *cert. denied*, 459 U.S. 854 (1982). There the court upheld the use of binoculars and a spotting scope—presumably a small telescope—to observe the area between a house, a garage, and a barn clearly visible from a road, on land which hunters and swimmers had been allowed to enter freely. But in that case also, the defendant could not reasonably have harbored an expectation of privacy in that area, the court said. 669 F.2d at 50. If the area in question had not been clearly visible from the road and if defendants had attempted to exclude trespassers with a high fence and an elaborate security system, such as reasonably to lead defendants to expect privacy, *Katz* would have compelled the court to invalidate the surveillance under the Fourth Amendment. Such a situation is analytically identical to the position of Dow.

III. Use Of A Private Contractor To Conduct Warrantless Searches Is Not Authorized By The Clean Air Act.

Section 114 of the Clean Air Act, 42 U.S.C. § 7414, delineates the authority of EPA to enter the premises and conduct inspections of emission sources. In relevant part section 114 provides:

> (a) for the purpose . . . (ii) of determining whether any person is in violation of any such standard or any requirement of such a plan, or (iii) carrying out any provision of this chapter.
>
> (2) *the Administrator or his authorized representative,* upon presentation of his credentials—
>
> (A) shall have a right of entry to, upon or through the premises of such person or in which any records required to be maintained under paragraph (1) of this section are located, and

(B) may at reasonable times have access to copy any records, inspect any monitoring equipment or method required under paragraph (1) and sample any emissions which such person is required to sample under paragraph (1).

(emphasis supplied).

By hiring a private corporation to engage in the aerial surveillance of Dow's plant, EPA exceeded the grant of authority in section 114(a)(2). The pilot of the aircraft involved in the present case, an employee of Abrams Aerial Survey Corporation, was not an "authorized representative" of the Administrator within the meaning of Section 114(a)(2). Although the term "authorized representative" may at first appear ambiguous, several cases which interpret section 114(a)(2) conclude that the term must be construed narrowly to include only officers and employees of EPA and not private parties.

Section 114(a)(2) was first construed in *Stauffer Chemical Company v. Environmental Protection Agency*, 647 F.2d 1075 (10th Cir. 1981) (*"Stauffer I"*), where a chemical company refused to admit two employees of a private contractor, GCA Corporation, who accompanied a team of EPA inspectors. EPA then obtained an *ex parte* administrative search warrant authorizing it to conduct the inspection of Stauffer's plant through the two GCA employees. Stauffer filed a motion to quash the warrant. The district court permanently enjoined EPA from using GCA employees or employees of other companies in any Stauffer plant without Stauffer's permission. The Tenth Circuit affirmed this decision, holding that employees of a private company under contract with EPA are not "authorized representatives" of the EPA Administrator for purposes of section 114 of the Clean Air Act. 647 F.2d at 1079.

The court of appeals enumerated several reasons for its construction. First, the court declined to give the phrase "authorized representative" a literal interpretation, noting that the "plain meaning" test did not solve the problem. *Id.* at

1078. Next, the court analyzed the legislative history of section 114(a)(2) and referred to the joint House and Senate conference committee report which stated that in the proposed amendment, "the Senate authorized entry and inspection by DHEW personnel . . . for purposes of setting standards and enforcing them."[5] *Id., quoting* H.R. Rep. No. 1783, 91st Cong., 2d Sess., *reprinted in* 1970 U.S. Code Cong. & Ad. News, 5356, 5379-81. This Senate bill became section 114(a)(2).

The Tenth Circuit also addressed the legislative history of amendments to the Clean Water Act, 33 U.S.C. § 1251 *et seq.* (1976) (Supp. I 1977, Supp. II 1978). In 1972, Congress amended the Clean Water Act to include section 308, 33 U.S.C. § 1318(a)(B), which is virtually identical to section 114(a)(2). The court noted that the Report of the Senate Public Works Committee stated:

> It should be noted that the authority to enter, as *under the Clean Air Act,* is reserved to the Administrator and his authorized representatives *which such representatives must be full-time employees of the Environmental Protection Agency.* The authority to enter is *not* extended to contractors with the EPA in pursuit of research and development.

S. Rep. No. 92-414, 92nd Cong., 2d Sess., *reprinted in* 1972 U.S. Code Cong. & Ad. News 3668, 3729 (emphasis by the court). The court recognized that post-enactment legislative history is generally not to be accorded the same weight as legislative history concurrent with the enactment of the statute, but considered the Senate Committee's statement reliable authority due to the short interval between the enactments of section 114(a)(2) of the Clean Air Act and section 308 of the Clean Water Act. *Stauffer I,* 647 F.2d at 1079. Further, the court pointed to the close subject matter relationship between

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[5] The Clean Air Act was administered by the Department of Health, Education and Welfare before EPA was created.

the two acts and observed that a contrary holding would anomalously give EPA the power to delegate to employees of private companies the authority to enter and inspect under the Clean Water Act, but not under the virtually identical Clean Air Act. *Id.*

The "contrary holding" discussed in *Stauffer I* surfaced in *Bunker Hill Company Lead and Zinc Smelter v. United States Environmental Protection Agency,* 658 F.2d 1280 (9th Cir. 1981) where the court held that the plain meaning of "authorized representative" is broader than "officers or employees". *Bunker Hill,* 648 F.2d at 1283.

The conflict between the holdings of the Ninth and Tenth Circuits was recognized and analyzed one year later in *United States v. Stauffer Chemical Co.,* 684 F.2d 1174 (6th Cir. 1982), *aff'd on other grounds* ____ U.S. ____, 104 S.Ct. 575, (1984) ("*Stauffer II*"). The facts in *Stauffer II* were identical to those in *Stauffer I,* except they arose in a Stauffer plant at a different location. In an analytically comprehensive decision, the Sixth Circuit held that the phrase "authorized representative" in Section 114(a)(2) means officers and employees of the EPA and does not include employees of private contractors. *Stauffer II,* 684 F.2d at 1189-90.

Several policy arguments support a narrow interpretation of "authorized representatives" limited to officers and employees of EPA. One is that such an inspection is unduly intrusive when conducted by private contractors who are not subject to the same constraints against disclosure of confidential information as are government employees.

More specifically, private parties are not subject to either the criminal sanctions or the substantive confidentiality standards provided by the federal trade secrets act, 18 U.S.C. § 1905. That statute expressly protects one's privacy interest in trade secrets. To allow employees of private contractors to make inspections under the authority of section 114(a)(2) without subjecting them to the confidentiality standards for

government employees established by 18 U.S.C. § 1905 would severely undermine this policy. Finally, private contractors are not subject to the constraints of Federal Reports Act, 44 U.S.C. § 3501 *et seq.*, which governs interagency transfers of confidential information.

In summary, a private contractor is not subject to the same constraints that restrict the acts of government employees. Since these restrictions are a legitimizing factor in allowing intrusive government inspections, private contractors should not be awarded the same latitude as government employees. Accordingly, the section 114(a)(2) grant of inspection authority to "authorized representatives" should be construed to include only government employees.

CONCLUSION

For the reasons set forth above, the judgment of the United States Court of Appeals for the Sixth Circuit should be reversed and the case remanded for proceedings consistent with the rights of the petitioner.

Respectfully submitted,

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No. 84-1259

IN THE
Supreme Court of the United States
OCTOBER TERM, 1985

THE DOW CHEMICAL COMPANY,
Petitioner,
v.
UNITED STATES OF AMERICA,
Respondent.

On Writ of Certiorari to the United States Court of Appeals for the Sixth Circuit

BRIEF OF THE CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA AND THE MOUNTAIN STATES LEGAL FOUNDATION AS AMICI CURIAE IN SUPPORT OF THE PETITIONER

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QUESTION PRESENTED

Whether the Federal Government's aerial surveillance and photographing of an open-air commercial facility violates the Fourth Amendment.

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BRIEF OF THE CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA AND THE MOUNTAIN STATES LEGAL FOUNDATION AS AMICI CURIAE IN SUPPORT OF THE PETITIONER

STATEMENT OF INTEREST [1]

For nearly two decades this Court has zealously guarded the constitutional right of the American business community to be free from unreasonable government inspections of its commercial facilities. In *See* v. *City of Seattle*, this Court held that:

> The businessman, like the occupant of a residence, has a constitutional right to go about his business free from unreasonable entries upon his private commercial property. The businessman, too, has

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[1] This brief is filed with the written consent of the parties pursuant to Supreme Court Rule 36.2. The parties' consent letters have been filed with the Clerk of this Court.

> that right placed in jeopardy if the decision to enter and inspect for violation of regulatory laws can be made and enforced by the inspector in the field without official authority evidenced by a warrant.

387 U.S. 541, 543 (1967). This constitutional principle was reaffirmed in *Marshall* v. *Barlow's Inc.*, 436 U.S. 307 (1978), where the Court held that a warrantless administrative inspection under the Occupational Safety and Health Act, 29 U.S.C. § 667 (1970), violated the Fourth Amendment. In so doing, the Court said "it is untenable that the ban on warrantless searches was not intended to shield places of business as well as of residence." 436 U.S. 307, 312 (1978).

The Sixth Circuit decision to allow the Environmental Protection Agency ("EPA") to conduct aerial surveillance of open-air commercial facilities without judicial oversight violates privacy rights traditionally afforded to businesses. This decision deprives companies of any assurance that their secured open-air facilities are protected from aerial intrusions, and thereby threatens the basis of our free enterprise system. On behalf of the businesses they represent, the Chamber of Commerce of the United States ("Chamber") and the Mountain States Legal Foundation ("MSLF" or "Foundation") respectfully urge this Court to reverse the decision below, which strips open-air commercial facilities of their Fourth Amendment protections by characterizing them as "open fields."

The Sixth Circuit's extension of the "open fields" doctrine to commercial facilities has far-reaching consequences for all businesses subject to government inspections. Numerous industries operate in the open-air because of economics, worker safety, or the nature of the business itself. Many chemical plants install critical aspects of their facilities out-of-doors. Petroleum and iron and steel operations also take place outside. The automobile industry conducts road tests on outdoor

tracks. All of these industries exclude the public from their facilities to protect trade secrets and the results of their research and development programs. If the decision below is upheld, these industries will be forced to take drastic steps to preserve their Fourth Amendment rights.

The Chamber and the Foundation are well-suited to present the broad spectrum of business interests affected by this case. Together, they represent member companies in these and other industries interested in protecting corporate privacy from the dangerous erosion of the Fourth Amendment approved by the Sixth Circuit. As the largest federation of business and professional organizations in the United States, the Chamber's membership includes more than 180,000 corporations, partnerships and proprietorships, as well as several thousand trade associations and state and local chambers of commerce. The Foundation is a nonprofit, membership, public interest law firm dedicated to defending and preserving individual liberties, private property rights, and the private enterprise system. Both the Chamber and the Foundation regularly represent their members' views in court on issues of national significance and, in fact, filed as *amici curiae* in support of the Petition for Certiorari in this proceeding.

STATEMENT OF THE CASE

This case arises out of a lawsuit filed by The Dow Chemical Company ("Dow") against the Environmental Protection Agency ("EPA") for taking aerial photographs of its 2000-acre manufacturing facility in Midland, Michigan, without judicial oversight, for use as evidence in an impending enforcement action under the Clean Air Act. 42 U.S.C. § 7401 (1983). The photographs captured in detail the interior regions of Dow's open-air plant, revealing valuable trade secrets.[2] Dow

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[2] None of the photographs revealed any Clean Air Act violations. Yet skilled technicians, working with high resolution equipment,

[Continued]

sought injunctive relief and a declaratory judgment that EPA's aerial surveillance of the facility violated its Fourth Amendment right to be free from unreasonable searches and seizures.

The District Court found that Dow had a reasonable expectation of privacy in the open-air interior regions of its plant,[3] and held that EPA's aerial activities violated the Fourth Amendment. The United States Court of Appeals for the Sixth Circuit reversed, holding that the Dow plant was not protected by the Fourth Amendment because it was an "open field" within the meaning of this Court's decision in *Oliver* v. *United States*, —— U.S. ——, 80 L. Ed.2d 214 (1984).

SUMMARY OF ARGUMENT

The "open fields" doctrine was first established in *Hester* v. *United States*, 265 U.S. 57 (1924),[4] where the Court held that "the special protection accorded by the Fourth Amendment to the people in their 'persons, houses, papers, and effects' is not extended to open fields." 265 U.S. at 59. Lower courts have applied the open

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[2] [Continued]
can read aerial photographs like a blueprint of the plant, and determine the configuration of technical process equipment, and the types and quantities of products being manufactured and inventoried on site. *See, E.I. duPont De Nemours & Co.* v. *Christopher*, 431 F.2d 1012, 1013-1014 (5th Cir. 1970), *cert. denied*, 400 U.S. 1024, *rehearing denied*, 401 U.S. 967 (1971).

[3] The District Court was "struck by the vivid detail and resolution" of the photographs which made it "possible to discern equipment, pipes and power lines as small as ½ inch in diameter." It noted that "[m]any of these minute, but observable items are located in *interior* regions of the plant which are surrounded by buildings and other structures which make observation from anywhere but *directly above*, a near physical impossibility." Petitioner's Appendix ("Pet. App.") at B-3 (emphasis in the original).

[4] The issue in that case was whether revenue officers who observed the defendant in possession of moonshine whiskey while hiding on his land conducted a warrantless search in violation of the Fourth Amendment.

fields doctrine predominantly in cases involving investigations of illegal activities on agricultural or undeveloped property.

This Court decided *Oliver* just last term to "clarify confusion that has arisen as to the continued validity of the [open fields] doctrine." 80 L. Ed.2d at 214. The Sixth Circuit's characterization of an outdoor manufacturing facility as an "open field" misapplies this Fourth Amendment concept, and undermines the Court's efforts to clarify the scope of the doctrine. As a result, the Sixth Circuit decision threatens the very essence of commercial privacy, and should be reversed.

The record in this case compels the conclusion that Dow's open-air but fully secured manufacturing facility is not an open field within the meaning of *Oliver*, and therefore is entitled to Fourth Amendment protection. Dow manifested an actual expectation of privacy in its open-air facility, as evidenced by its extensive plant security system and strict control over cameras and photography on site. Moreover, society, by virtue of long-standing precedent, recognizes commercial privacy and the right of companies to protect their trade secrets.

ARGUMENT

I. THE OPEN FIELDS EXCEPTION TO THE FOURTH AMENDMENT DOES NOT APPLY TO COMMERCIAL FACILITIES, AND BY NECESSITY DOES NOT APPLY TO AERIAL PHOTOGRAPHS OF OPEN-AIR COMMERCIAL FACILITIES.

The Fourth Amendment guarantees "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures. . . ." U.S. Const. amend. IV. The purpose of the Fourth Amendment is to safeguard the privacy and security of individuals against arbitrary invasions by governmental officials. *Camara* v. *Municipal Court*, 387 U.S. 523 (1967).

The decisions of this Court firmly establish that Fourth Amendment protection extends to business premises as well as homes. *Marshall* v. *Barlow's Inc.*, 436 U.S. 307 (1978); *G.M. Leasing Corp.* v. *United States*, 429 U.S. 338 (1977); *See* v. *City of Seattle*, 387 U.S. 541 (1967). By characterizing Dow's manufacturing plant as an "open field," the Sixth Circuit stripped it of all Fourth Amendment protection, giving the government a carte blanche to conduct aerial surveillance of all open-air commercial facilities. The Sixth Circuit's holding and its result is unsupported in law and contrary to public policy.

This Court's reaffirmation of the open fields doctrine in *Oliver* in no way supports the Sixth Circuit's decision that Dow's open-air manufacturing plant is an "open field." A secure and developed commercial facility has never been held, by this Court or any lower court, to be an open field.[5]

The Fourth Amendment does not apply to open fields because no right of privacy can be reasonably expected

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[5] The open field cases cited in the Government's Brief in Opposition do not support the Sixth Circuit decision. *See United States v. Allen*, 675 F.2d 1373 (9th Cir. 1980), *cert. denied*, 454 U.S. 833 (1981) (aerial surveillance of marijuana smuggling operations in a "secluded area"); *United States* v. *DeBacker*, 493 F. Supp. 1078 (W.D. Mich. 1980) (aerial surveillance of marijuana growing on a farm located in a sparsely populated area of the state characterized as "boondocks"); *United States* v. *Hensel*, 699 F.2d 18 (1st Cir.), *cert. denied*, 461 U.S. 958 (1983) (surveillance of marijuana smuggling operations on the high seas); *United States* v. *Lace*, 669 F.2d 46 (2d Cir.), *cert. denied*, 459 U.S. 854 (1982) (surveillance of marijuana smuggling operations on property "clearly visible from the road" and observable by "outsiders who 'could enter the property at will'"); *United States* v. *Minton*, 488 F.2d 37 (4th Cir. 1973), *cert. denied*, 416 U.S. 936 (1974) (observation of illicit whiskey from an embankment looking down over residence and storage building). *Amici*'s own legal research has not found a single case in which a developed commercial facility was deemed to be an open field.

there. *United States* v. *Freie*, 545 F.2d 1217 (9th Cir. 1976), *cert. denied*, 430 U.S. 966 (1977). Since *Hester*, the application of the open fields doctrine has been limited generally to rural, agricultural lands.[6] The areas surveyed in *Oliver* were marijuana patches grown on a farm over a mile from the residence and in the woods behind the residence, and were observed by police from the ground. The Court found those areas to be "open fields" within the meaning of *Hester* because they were "rural" [7] and "by their very character as open and unoccupied, are unlikely to provide the setting for activities whose privacy is sought to be protected by the Fourth Amendment." [8] None of the descriptions used by this Court to illustrate the scope of the open fields doctrine remotely resembles the Dow facility at issue here.[9] In fact, in explaining why Fourth Amendment protection does not extend to open fields, this Court emphasized the difference between a commercial facility and an open field:

> . . . [O]pen fields do not provide the setting for those intimate activities that the Amendment is intended to shelter from government interference or surveillance. There is no societal interest in protecting the

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[6] Most open field cases involve the discovery of marijuana growing in secluded areas. *See, supra* note 5; *see also, Gibbens* v. *State*, 156 Ga. App. 258, 274 S.E.2d 595 (1980), *cert. denied*, 450 U.S. 1026 (1981); *People* v. *Lashmett*, 71 Ill. App.3d 429, 389 N.E.2d 888 (1979), *cert. denied*, 444 U.S. 1081 (1980).

[7] *Oliver*, 80 L.Ed.2d at 224.

[8] *Id.* at 225, n. 10.

[9] "One need only think of the vast expanse of some western ranches or of the undeveloped woods of the Northwest . . ." *Id.*; "It is clear . . . that the term 'open fields' may include any unoccupied or undeveloped area outside the curtilage . . . For example, . . . a thickly wooded area . . . may be an open field as that term is used in construing the Fourth Amendment." *Id.* at 225, n. 11; "Most of the many millions of acres that are 'open fields' are not close to any structure . . . ." *Id.* at 226, n. 12.

> privacy of those activities, such as the cultivation of crops, that occur in open fields. Moreover, as a practical matter these lands usually are accessible to the public and the police *in ways that* a home, *an office or commercial structure would not be.*

Id. at 224 (emphasis added).

While there is no societal interest in protecting the activities that occur in open fields, society does have an interest in protecting the activities occurring in commercial settings. "The Fourth Amendment's protection of offices and commercial buildings, in which there may be legitimate expectations of privacy, is . . . based upon societal expectations that have deep roots in the history of the [Fourth] Amendment." *Id.* at 224, n. 8.[10] Aerial surveillance of commercial facilities offends these traditional notions of corporate privacy, and must be limited by the Fourth Amendment.

II. AERIAL PHOTOGRAPHS CAPTURING THE DETAILS OF OPEN-AIR COMMERCIAL FACILITIES CONSTITUTE UNREASONABLE SEARCHES UNDER THE FOURTH AMENDMENT.

Since it is inconceivable that a manufacturing facility is an open field, then EPA's aerial surveillance of the Dow plant is not exempt from the Fourth Amendment prohibition against unreasonable inspections. In *Camara*

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[10] Society also has an interest in protecting business' right to protect its trade secrets. The common law rights of privacy recognize a cause of action against any third party that might try to photograph Dow's plant. *See,* Restatement of Torts, § 757(a) ("[t]he law . . . protects the holder of a trade secret against disclosure or use when knowledge is gained, not by the owner's volition, but by some 'improper means'") (*quoted in Kewanee Oil Co.* v. *Bicron Corp.*, 416 U.S. 470, 475-476 (1974)). And, this Court, itself, has at least twice disapproved the acquisition of trade secrets by industrial espionage. *See, Kewanee Oil Co., supra; E.I. duPont De Nemours & Co.* v. *Christopher,* 431 F.2d 1012 (5th Cir. 1970), *cert. denied,* 400 U.S. 1024, *rehearing denied,* 401 U.S. 967 (1971).

v. *Municipal Court*, this Court held that "except in certain carefully defined classes of cases, a search of private property without proper consent is 'unreasonable' unless it has been authorized by a valid search warrant." 387 U.S. at 528-529. The Court decided *See* v. *City of Seattle* on the same day, extending the rule of *Camara* to inspections of commercial facilities, and holding that "administrative entry, without consent, upon the portions of commercial premises which are not open to the public can only be compelled through prosecution or physical force within the framework of warrant procedure." 387 U.S. at 545. The Court upheld the applicability of the warrant clause to administrative inspections in *Marshall* v. *Barlow's, Inc.*, stating:

> The authority to make warrantless searches devolves almost unbridled discretion upon executive and administrative offices, particularly those in the field, as to where to search and whom to search. A warrant, by contrast, would provide assurances from a neutral officer that the inspection is reasonable under the Constitution, is authorized by statute, and is pursuant to an administrative plan containing specific neutral criteria. Also, a warrant would then and there advise the owner of the scope and objects of the search, beyond which limits the inspector is not expected to proceed. These are important functions for a warrant to perform, functions which underlie the Court's prior decisions that the Warrant Clause applies to inspections for compliance with regulatory statutes.

436 U.S. at 323-324. (citations omitted). The Clean Air Act satisfies these objectives of judicial oversight under § 113(b)(4) of the Act, by requiring EPA to obtain a civil injunction whenever a company refuses an inspection request. 42 U.S.C. § 7413(b)(4).

The Sixth Circuit recognized the applicability of the *Barlow* decision to the case below when it stated that "[i]f the government action in this case—EPA's aerial

photography of Dow Chemical's Midland, Michigan plant —constitutes a Fourth Amendment 'search,' then *Barlow's* controls, and EPA's warrantless search violated Dow's Fourth Amendment rights." Pet. App. at A-5. The Sixth Circuit determined, however, that no search had occurred.

According to the two-part test for determining what constitutes a search, the party claiming Fourth Amendment protection must demonstrate, first, an actual (subjective) expectation of privacy and, second, that expectation must be one that society recognizes as reasonable. *Katz* v. *United States*, 389 U.S. 347, 361 (1967) (Harlan, J., concurring). The Sixth Circuit does not dispute that Dow exhibited an actual expectation to be free from ground-level intrusions.

> Here Dow had an actual expectation of privacy in certain parts of its plant, privacy which included the freedom from certain kinds of intrusion. Dow took great pains to be free from ground level intrusion by building a perimeter security fence and employing security guards. 536 F. Supp. at 1364-65. Hence, Dow had a kind of actual privacy expectation in these parts of its plant, a privacy interest to be free from ground level intrusions from the street.

Pet. App. at A-8. Nevertheless, the court held that EPA's aerial photography of the Dow plant was not a "search" because Dow showed no actual expectation of privacy from *aerial* intrusions.

A. Dow Manifested A Reasonable Expectation of Privacy Against Photographic Intrusions.

The government action at issue in this case is EPA's aerial *photography* of Dow's plant, not mere unaided observation of "outdoor spaces between plant buildings," as contended by the Sixth Circuit. Pet. App. at A-4. These photographs depict details of the plant that were

not visible to the naked eye, and by their very nature were capable of being enlarged for further study.[11]

In addition to preventing unauthorized ground level entry, Dow also takes great pains to protect its plant from being photographed by unauthorized personnel. EPA was well aware of this policy against unauthorized photography, since its intention to take pictures of the plant was the very reason expressed by Dow for denying the second inspection request. And, it was in the context of taking photographs that the possibility of getting a warrant was discussed.

While the Sixth Circuit concedes that "no one could reasonably expect Dow to build a dome over its entire Midland plant," it offers no reasonable alternative to the precautions already taken by the company to protect its premises from being photographed. Pet. App. at A-8. The court's suggestion that Dow could have "shielded the critical spaces in between its buildings," mischaracterizes the privacy interest at issue here, namely, the configuration of its equipment, pipes and powerlines. *Id.* Moreover, the Sixth Circuit's decision fails to appreciate the economics of operating open-air commercial facilities. The Sixth Circuit creates an artificial distinction between the roofed and open portions of the manufacturing facility. Such a distinction is inherently unworkable because the open-air equipment is an integral part of the activities that occur in the contiguous buildings. Dow clearly demonstrated an actual expectation of privacy, and short of building a giant dome, there was little else the company could have done to protect itself against this vertical intrusion.

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[11] Enlargements of these photographs were hung on an office wall in EPA's Regional Office in Chicago. *See* Petitioner's Brief on the Merits at 12.

B. Detailed Aerial Photographs of Commercial Facilities Are Unreasonably Intrusive.

The Sixth Circuit's decision that an open-air commercial facility can have no reasonable expectation of privacy from aerial photography ignores the intrusiveness of the government's action in this case. There is no comparison between a mere "aerial observer" and the kind of government surveillance at issue here. EPA's aerial photography of the Dow plant is more akin to telescopic and telephoto surveillance techniques than it is to unaided observation from a public place. *Compare United States* v. *Taborda*, 635 F.2d 131 (2d Cir. 1980) and *United States* v. *Kim*, 415 F. Supp. 1252 (D. Hawaii 1976) *with Air Pollution Variance Board* v. *Western Alfalfa Corp.*, 416 U.S. 861 (1974). Commercial airplanes do not make repeated runs over open-air plants. Nor do they use floor-mounted aerial mapping cameras to photograph a plant's inner workings. Contrary to the Sixth Circuit's decision, government surveillance and aerial photographs that depict minute details of commercial facilities are unreasonably intrusive under the Fourth Amendment.

Nor were these photographs necessary to further federal interests. Other means for obtaining evidence of noncompliance were available to EPA.[12] Furthermore, obtaining judicial oversight will not frustrate EPA's enforcement of the Clean Air Act. Manufacturing facilities, like Dow's Midland plant, can afford neither the production time nor the money it would cost to shut down or otherwise alter their operations to elude government inspections. This Court should not allow a federal agency to circumvent the Fourth Amendment by using inspection techniques which are neither authorized by statute nor supported by the Constitution.

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[12] Dow had earlier provided EPA with schematic drawings of the powerhouses which the Government claims were the focus of its aerial surveillance. And, an EPA inspector could have used a Ringlemann Test (smoke-reader) to detect any air quality violations. *See, Air Pollution Variance Board* v. *Western Alfalfa Corp., supra.*

CONCLUSION

A fully developed open-air commercial facility is not an open field, and is entitled to protection from aerial surveillance under the Fourth Amendment. This intrusive government search violated Dow's reasonable expectation of privacy in the details of its commercial structures. For these reasons, the Chamber of Commerce of the United States and the Mountain States Legal Foundation respectfully urge this Court to reverse the decision below.

Respectfully submitted,

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